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Address

ATENT AND ACTIVE NEURASTHENIA IN ITS RELATION TO SURGERY *

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Specialists usually divide functional neurotic disorlers into hysteria, neurasthenia and hypochondria.

Hysteria is a special psychic state often produced in rtain individuals by suggestion, and capable of being elieved by persuasion. It is a condition of nervous nstability, stigmatized by emotional storms, crises, contractures and paralyses, by a craving for sympathy, a [illegible]e for an audience, and a tendency to pose.

Neurasthenia is a fatigue neurosis due in part to malnutrition and in part to functional overexertion, occurring in persons with hereditary or acquired predisposition. It is characterized by exhaustibility of the nervous system, slight exertion causing prostration and bringing on the various distressing symptoms from which the tient suffers.

Hypochondria is a mental disease marked by obses- ons, depressions and morbid fears concerning the health he individual. It is not very common, is easily diag- osticated and is usually incurable.

Hysterical patients give a great deal of trouble before
ion, but do ve[illegible]well after the ordeal is over.
oman who describes her symptoms with hesi-
ivacity, who desires to discuss every detail of her
ation and subsequent treatment, and who is pos-
ssed with exaggerated fears of complications which
ay develop, or of the ultimate result which may follow,
ually, after the operation is over, becomes a model
ient. Her imagination enters on fresh fields; she
comes hopeful and courageous, and begins at once to
an a new life of activity.

Neurasthenic patients usually discuss their cases
lmly and logically; they describe their symptoms sys-
lly and employ technical terms correctly. They
arly every organ in the body. The essen-
ir clinical picture is fatigue, exhaus-
fa for prolonged physical or mental
have rom general weakness, headache,
patie . Their mental condition is one
dent d indecision. They do not reach
ated nable to fix their attention for
othe They usually have digestive and
pron ten grossly exaggerate the impor-
ent r s. They frequently have psychic
com rritability, introspection and sel-
the l ly convinced as to the nature of
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their disease, and come to the surgeon for what they believe to be a necessary operation.

Hypochondriac patients are the victims of what is often a hopeless psychosis. The individual is possessed with the idea that she has some strange and horrible malady. She soon wears out the patience of her family and friends, and in order to secure a sympathetic listener, and to demonstrate to the community the serious nature of her disease, she goes from surgeon to surgeon, and from hospital to hospital, offering herself as a bloody sacrifice to her curious obsession, and glorying in her martyrdom.

While in theory it is easy to distinguish between hysteria, neurasthenia and hypochondria, in practice it will be found that the symptoms of two or more of them are often present in the same patient at the same time. Thus, one writer says that all hysterical patients are neurasthenic, but that not all neurasthenics are hysterical. Name and classify neuroses as you please, the trail of the serpent is over them all.

In deploring the frequency of neurasthenia, and in criticizing the occurrence of the disease in the hands of practitioners in other departments of medicine, it should be remembered that surgeons are responsible for the development of a large number of these cases. A surgical operation injudiciously performed, or carried out without proper precautions on a susceptible patient, will frequently be the beginning of a neurosis, and terminate in the condition known as traumatic or surgical neurasthenia.

It is my object, first to emphasize the importance of refusing to operate on a neurasthenic patient unless the symptoms can be clearly shown to be due to organic disease, and, second, to emphasize the necessity, if an operation is undertaken on a patient with either latent or developed neurasthenia, of protecting the nervous system from psychical and physical shock, not only by a proper preliminary preparation, but by careful and often prolonged postoperative and posthospital treatment.

A surgeon cannot be expected to be an expert neurologist, but for his own happiness, if not for his patients' welfare, he must study functional neurotic disorders, as well as organic diseases. He must learn to know his limitations, as well as to recognize his abilities, and to estimate the possible injurious effects, as well as the probable beneficial results to be expected from surgical intervention. He must remember that the patient does not come to him primarily to be cut, but to be cured; and that an operation is not a success unless the individual is restored to health, not only physically, but also psychically; not only anatomically, but also symptomatically. In surgery the main question is no longer one of mortality, but one of morbidity. In endeavoring to forecast the final results of an operation, the mental and nervous condition of the patient must be carefully con-

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at the annual meeting of the Southern
sociation, Hot Springs, Va., Dec. 14-16,

sidered. If neuroses exist, without anatomic disease, an operation will do no good and may result in harm. If neuroses are found coincident with pathologic lesions, an operation may prove of great benefit; but in relieving the physical disease care must be taken to avoid increasing the nervous disorder. If neuroses are present, reflex in character and due to remediable causes, an operation may be undertaken with assurance of complete success. In other words, the surgeon should divide these cases into three classes: the first to be avoided; the second to be undertaken with caution, and the third to be cheerfully given the relief to which they are entitled.

Of the class to be avoided because the neurasthenia has no organic basis, Goodell says:

> The sufferer may be a jilted maiden, a bereaved mother, a grieving widow, or a neglected wife, and all her uterine symptoms—yes, every one of them—may be the outcome of her sorrow, and not of her local lesions. She is suffering from a sore brain and not from a sore womb.

Here an operation will not relieve, but will aggravate, the symptoms.

In the class to be undertaken with caution because the neurasthenia is merely coincident with anatomic disease, it is often a question whether the patient had better endure the evils he has, or fly to those he knows not of. In some cases it may be deemed best to operate, not to cure the neurasthenia, but to relieve the pathologic condition. Great care must be exercised in the management of these cases to avoid increasing the nervous weakness by the very means used to cure the physical discomfort. This is especially true in patients who have been previously the subject of other operations.

Of the class in which the neurasthenia is directly due to anatomic disease, it may be said that if the diagnosis can be made and the cause removed, the patient will be cured. Often the symptoms are obscure and misleading, and much patient investigation will be necessary to reach the proper conclusion. A distinguished modern surgeon cites an instance occurring in his early professional life of a patient long treated, without improvement, for digestive disturbances. The surgeon, who had decided that the man was a neurasthenic, one day found that his patient had acute appendicitis. He operated on him, removing the appendix. Much to his disappointment, the patient, after leaving the hospital, complained as before, and the surgeon was, therefore, confirmed in his opinion that the patient was a neurasthenic. Later, the patient developed jaundice and symptoms of cholecystitis. He was operated on a second time and a number of gallstones removed. Before he left the hospital, however, he began to have his old pains, and then the surgeon said that he knew the patient was a neurasthenic. Without expectations of benefit, a skiagraph was made of the patient's abdomen, and it was found that he had a stone in his right kidney. A third operation was performed, the stone removed, and from that time the patient has been well.

This is not a unique case. All of us have had similar, if not quite such striking, experiences. The story is told to emphasize the fact that even an apparently hopeless neurasthenic should not be condemned without a trial, as some of them may be cured, provided a correct diagnosis is made.

Two separate preliminary examinations should be made of every surgical patient: the first for diagnosis—to determine the condition to be corrected; the second, for prognosis—to determine the safety of the operation and the probability of a complete cure resulting from it. To do this satisfactorily, it will usually be found necessary to secure the aid of several specialists. Few su geons have the time or skill to make the necessary phys cal examination of the heart and lungs, or the laborator investigation of the urine, blood and stomach content to say nothing of the special work which is sometim required of the bacteriologist, ophthalmologist, neurol gist, roentgenologist and other experts. Patients wi not be found to object to frequent and prolonged exam nations, but will be inspired with confidence in the su geon by the realization that nothing is taken for grante and that every effort is being employed to ascertain th nature of their trouble and the best method to effect cure. In fact, the laity are now so educated in medic matters that failure to give a patient a thorough pr liminary examination is a cause for criticism and di trust.

An important exception to this rule, however, is the case of a young unmarried woman who complains pelvic symptoms. She may be of neurotic temperamen and, owing to backache and painful menstruation, h become convinced she has uterine or ovarian diseas when, in fact, she has no local trouble. On the oth hand, she may have cervical stenosis, uterine displac ment, or ovarian cystoma. In such a case a physica examination should be made to ascertain whether th trouble is neurologic or gynecologic. To minimize th psychical shock and to avoid physical pain, the exam nation should be made under a general anesthetic. I the symptoms are due to some defect of the nervous sy tem, the patient should be positively assured that she ha no local lesion, and be referred to a physician for ge eral treatment. If, on the other hand, the symptoms ar due to actual disease of the pelvis, the patient should b given the surgical relief her case demands. Noble ha emphasized the fact that virgins rarely suffer from trau matism and infection of the genital organs, and whe pathologic disease exists they almost invariably deman operative treatment. Repeated examinations, local appl cations, and other manipulations do them little goo and often convert them into chronic nervous invalid The "pelvic woman" of the old author is the "sex neurasthenic" of the modern writer.

The preparation of a patient for operatio both physical and psychic. In the past much atte has been paid to the first, and but little to the secon We now recognize that we have overdone starvatio purgation and disinfection, and have neglected to stud the patient's mental attitude to the operation, in ord to lessen apprehension, if it is unduly present; to inspi confidence, if it is lacking; and to lay the foundation fo a philosophy which will be needed during convalescenc

The first effort should be directed to relieving th patient's dread of going to the hospital. The la being rapidly educated to a just apprecia advantages afforded by such institutions, still regard them as a cross between house. The easiest and most eff this belief is to induce the pati several days before the date fixe the environment of a well-regula ment and fear will soon be rep hope.

The surgeon should see the p ing should be kindly but not patient should be made to real will receive all needful attentio in the day's work. Care should her, not to magnify the importa difficulty and danger incident patient's relatives and friends should, of course, be informed of the facts in the case, but the patient should not be burdened with doubts and fears or made to assume any responsibility for the conduct of the case.

It is, however, important at this time to warn the patient against certain symptoms, complications and sequelæ which may develop after the operation, though they entail no danger and will not affect the final result. For instance, a patient to be operated on for hemorrhoids should be told that possibly she will require catheterization for a day or two; and a patient with fibromyoma of the uterus, that artificial menopause will follow, with symptoms such as usually occur at the "change of life." A word of warning before the operation will be found to be worth more than an hour's explanation afterward, to prevent discouragement from ordinary sequelæ whose significance and importance are not understood.

Finally, the patient's fear of the anesthetic should be relieved by reassurance, reason or ridicule. A badly frightened patient should never be sent to the operating-room. Psychic shock is a greater factor than traumatic shock in the production of surgical neurasthenia.

Some patients are in good nervous and physical condition and require practically nothing but the mechanical correction of a local trouble. Others are as seriously affected nervously as they are physically, and often will be more benefited by a modified form of rest-cure than by the operation itself. Most surgeons recognize this fact, but are often unable to carry out the principles of seclusion, rest, full feeding, bathing, massage and electricity, as taught by Mitchell, because of the present attitude of the public to surgery. Not many years ago an operation was considered, in the words of the marriage ceremony, as something not to be entered into unadvisedly or lightly, but discreetly, soberly, and in the fear of God. To-day it has become to be regarded as a comparatively trivial event, and the principal dread is the surgeon's fee. In the old days it was understood that a patient requiring a serious operation would have to remain two or three months in a hospital. At present, patients enter the hospital one day, are operated on the next, and before they stop vomiting begin to ask when they can go home, and usually are permitted to leave before it is wise for them to do so.

Nearly all surgeons admit the injurious results which frequently follow the premature discharge of a patient from the hospital, and many of them try to evade responsibility by attributing the evil to the unreasonable insistence of the patient to be permitted to return home. The fault, however, is not with the laity, but with the profession. Patients would consent to longer detention in the hospital if they believed it to be necessary. The fault is with a few surgeons who, for various reasons, have entered into a competition to see who can get their patients out most quickly, and have thereby set a precedent which others have followed. Some have been actuated by a desire to save the patient time and money; others by a desire to advertise themselves. The public is prone to estimate the ability of a surgeon by the apparent rapidity of the recovery of his patients, and to make comparisons between different operators on the basis of the length of time they keep their patients in the hospital. This is not surprising, as even some of the profession do not seem to realize fully that, all things being equal, a wound will not heal more quickly for one surgeon than it will for another, and that the number of days a surgeon keeps a patient in bed is not a measure of his surgical dexterity, but of his surgical judgment.

In order to appreciate the dangers to a patient of premature discharge, it is necessary to contrast the conditions of hospital and home life. The change is as decided and the influence as great to the one sex as the other, the man on returning home being confronted by financial obligations and business complications, and the woman by family cares and domestic duties.

What has been said with reference to the short stay of patients in the hospital, and the conditions which frequently exist at home which work adversely to their recovery, makes it plain that those interested in their welfare should consider thoughtfully the situation and endeavor to remove the evil. The remedy obviously consists in the patient's remaining longer under the care of the surgeon, and, on returning home, being placed under the close supervision of the family physician.

A patient should not be detained too long in the hospital, as it is not only a waste of the individual's time and money, but also tends to the creation of invalidism. On the other hand, a patient should not be dismissed too soon, as failure to secure the expected benefit from the operation may lead to discouragement, which finally results in well-established neurasthenia. Convalescence is a question of temperament, and must be psychic as well as physical. People are coming to regard surgeons as mechanics and patients as machines which are to be repaired. They must be taught that the operation is not everything, and that the after-treatment is often of equal importance. They must be made to understand that the operation merely corrects an abnormal condition and puts Nature in a position to effect a cure; that often the first effect of an operation is injurious, and that the beneficial results are experienced only after the system recovers from the shock and readjusts itself to new conditions; that sometimes it takes weeks, months or even years for this to be accomplished. They must be impressed with the fact that, when the wounds have healed, surgical patients are not well, but should remain in the hospital until they have regained to a certain extent their physical strength and nervous equilibrium, and that after returning home, for a time, they should lead a life of prudence and restraint.

The surgeon usually attempts to direct the treatment of patients after they return home by giving them instruction when they leave the hospital, and by subsequently corresponding with them; but the end desired can be more effectually and properly secured by referring the patient back to the family physician. The reason verbal instructions are not satisfactory is that they cannot cover all eventualities, are frequently not understood and are sometimes hasty and perfunctory. The reason subsequent treatment by mail is not satisfactory is that patients usually fail to give important facts, and either exaggerate or underestimate their symptoms; also that the surgeon cannot remember their idiosyncrasies and peculiarities, and, even if he prescribes correctly, his advice lacks the personal element of suggestion which is so essential to make it efficient.

It would be much better if the patient were examined before she left the hospital and told that, while the operation which had been performed had satisfactorily corrected the condition which had given rise to her symptoms she was not yet well and that it would require some months of proper living to restore her to full health and activity; and if she were directed, moreover, on returning home, to place her case in the hands of her family doctor. This would safeguard the patient's future welfare and would overcome to a large extent the growing feeling on the part of the general practitioner that he is not always fairly treated by the surgeon.

Few surgeons are willing to turn patients over to a physician immediately after a serious operation. Complications are often so sudden and dangerous, symptoms so slight and misleading, diagnosis so difficult, and correct treatment so essential, that no one except a man who has had long and constant experience in the management of this special class of cases is competent to have charge of them. When, however, the danger of the operation is over, and the subsequent treatment consists in regulating the various functions of the body, restoring lost flesh and strength and re-establishing nervous and mental equilibrium, the family physician becomes the safer adviser.

With the rapidly increasing amount of surgery being done and the consequent number of convalescent patients under treatment, an educational move ought to be instituted for the study of the many peculiar factors involved. Papers ought to be written and discussions ought to be participated in by both surgeon and family doctor, the various details being taken up and discussed from the different standpoints, until finally there is evolved a consensus of opinion with reference to the many important points in the treatment of these patients. These should include the question of a proper dietary; of the best method of regulating the bowels; of treating bladder irritation; of the number of hours of sleep, and of the necessary periods of rest during the day; of the amount of exercise that is permissible; how soon the sewing-machine may be employed or housework taken up; the question of driving, riding horseback, dancing, swimming and athletic contests; the sort of clothing to be worn; whether corsets are injurious or an abdominal binder necessary; the question of prudence at menstrual periods and the relief of pain often experienced at that time; the treatment of headache, the administration of tonics, nervines and hypnotics; the use of baths, massage and electricity; the protection of wounds; the employment of douches; the use of tampons; the periods at which sexual relations may be resumed—these and a hundred other questions all require consideration in order that they may be settled. When surgeons appreciate the influence of neurasthenia on the result of an operation and the influence of an operation on the production of neurasthenia, when the family physician is educated in the details of posthospital treatment and given legitimate work with proper compensation, then, and not until then, will there be harmony in the profession and the greatest good accomplished to the greatest number of patients.

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Primary Hyperplastic Tuberculosis of Stomach and Duodenum.—A woman of 33, the mother of four children, was admitted to the hospital complaining of loss of flesh, frequent vomiting and a lump in the abdomen. Pain came on a quarter of an hour after taking food. Examination showed a dilated stomach, marked peristalsis and on palpation a hard, movable, elongated tumor below the right costal margin in the position of the pylorus. The duration of the symptoms suggested non-malignancy. At operation later the stomach wall and omentum were covered with miliary tubercles and the glands in the gastro-colic omentum were enlarged. The tumor was smooth on the surface and occupied the whole circumference of the pyloric end of the stomach. The tumor was not removed but a gastrojejunostomy performed. The patient gained 20 pounds but died five months after the operation.—Nash, in *Proc. Royal Soc. Med.*, December, 1909.

Original Articles

MALIGNANT DISEASE OF THE SACRUM SIMULATING SCIATICA

(RADICULAR SCIATICA) *

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Localization of pain on the posterior surface of the legs may be indicative of a condition other than the classical sciatica. Although the majority of the classical signs of the latter affection may be present in a given case, nevertheless an error may be committed if a careful examination of the objective sensory disturbances is not made. The mode of distribution of a sensory diminution or exaggeration is an important matter from a diagnostic standpoint. When a peripheral nerve trunk, for example, is affected, the hypoesthesia or anesthesia accompanying the condition is distributed irregularly, in plaques, so to speak, and assumes either a longitudinal or oblique arrangement. When the root of the same nerve trunk is involved the sensory disturbance will be present in a longitudinal form regularly distributed and running parallel with the axis of the limb. We have to deal here with a radicular sensory trouble.

In order to render this subject more comprehensive, it is sufficient to mention the case of Chipault and Demoulin,[1] in which a resection of the ulnar nerve was made for a severe pain confined apparently to the area corresponding to that nerve. As the pain persisted, a second section was made above the first. No relief was obtained. When a thorough and careful examination of the objective sensory disturbances was made, it was found that the seat of the pain did not correspond exactly to the area of distribution of the ulnar nerve, as it was thought on the first superficial examination, but to the area of distribution of the eighth cervical root. Accordingly the latter was resected and recovery immediately followed.

It is, therefore, evident that while subjective disturbances, such as pain, may simulate an affection of a peripheral nerve-trunk, this fact alone is not sufficient for the localization of the lesion. It is the objective investigation that will lead to a proper recognition of the seat of the lesion.

Pain along the course of the sciatic nerve does not necessarily indicate the seat of the lesion in the trunk of the nerve, but it may be also the result of involvement of the plexus from which the sciatic nerve originates, or of the nerve roots. The importance of this knowledge in any given case presenting symptoms of sciatica is evident. Should a surgical condition, for example, in the vicinity of the sacral plexus be overlooked simply because the patient presents the habitual manifestations of sciatica, the error will lead to disastrous results. If, on the other hand, we have to deal with a usual case of neuritis or neuralgia of the sciatic trunk itself, our medical or surgical interference will be directed exclusively to the peripheral trunk of the nerve, but not to its root. The two cases which I am about to report are the best illustration of this contention. The knowledge of involvement of the nerve roots instead of the nerve trunk itself for the lower extremities is comparatively recent.

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* Read before the Philadelphia County Medical Society, Dec. 8, 1909.

[1] Nouvelle Iconographie de la Salpêtrière, May-June, 1895.

The first observation is that of Lortat-Jacob and Sabaréanu.[2] Since then about a dozen cases have been reported, and this form of sciatica is at present admitted by all writers. The discovery of the affection is due to the extreme care with which cases of sciatica have been studied, particularly from the standpoint of abnormal sensory distribution. The importance of the subject cannot be overestimated, as therapeutic indications are directly dependable on this knowledge.

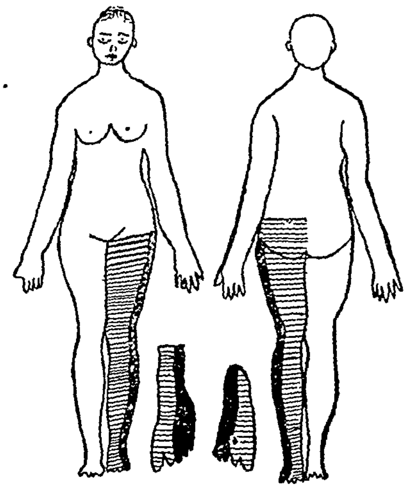
DIFFERENTIAL DIAGNOSIS

When a comparison is drawn between the classical sciatica and a radicular sciatica, we find that, while pain and other subjective sensations, such as burning, coldness, tingling, etc., the tender points of Valleix and Lasègue's sign, are all observed in both forms, the objective sensory distribution is essentially different. On the other hand, the anatomic and experimental studies show that the distribution of a sensory root in the skin does not at all correspond to the mode of distribution of a peripheral nerve-trunk. A nerve-trunk is the result of a combination of an anterior motor root and posterior sensory root. In their intraspinal course the roots are in relation with the vertebræ and dura mater. A lesion within the canal, such as tumor, pachymeningitis, disease of the bone may affect only one of the roots. Should the sensory root alone be involved, the sensory disturbance will follow a special distribution, a root—or radicular distribution. In case of the sciatic nerve we will have, therefore, a radicular sciatica in contradistinction to a neuritis or neuralgia of the nerve-trunk itself.

In the two cases I am reporting, pain along the posterior aspect of the leg was present, which was aggravated by walking. Overextension of the leg caused intense suffering. The tender spots were, however, not complete. In the first case they were observed only at the sciatic notch; in the second case at the notch and in the calf muscles; in both cases the iliac bone was painful. Shortly speaking, the majority of the symptoms of a genuine sciatic neuritis were present here. But what is important is the objective sensory disturbances. They led me to look for the morbid process not in the sciatic nerve-trunk itself, but higher up toward the sacral plexus and the roots themselves. When the involvement of the latter was revealed, the investigation was directed toward the bony canal. Affections of cauda equina and conus medullaris, also of other spinal cord diseases being excluded, the sacral vertebræ were incriminated. A careful and repeated examination led to the discovery of a slight but undoubted enlargement of the sacrum on the affected side. Operative procedures immediately instituted proved the contention to be correct. The affected bone evidently compressed and irritated the sensory branches of the posterior division of the lumbar and sacral nerves distributed over the integument of the gluteal region and sacrum. It also irritated some branches of the sacral plexus and also the common trunk of the sciatic nerve in its passage through the great sacro-sciatic foramen. It was, therefore, a complex condition, and for this reason the complete typical picture of a sciatic neuritis or neuralgia was not present. The predominance of subjective painful phenomena cannot, therefore, be relied on for exact localization.

CASE 1.—Mrs. G., of Brooklyn, had been suffering for two years from pain in the area of distribution of the left sciatic nerve. At first the pain was confined to the level of the posterior superior spine of the ilium, but gradually the entire leg became painful. At the beginning the patient would be relieved by various medications and she would have more or less prolonged intervals of total freedom from pain. At the end of several months the pain became more persistent. Her physician would be obliged frequently to have recourse to morphia, so painful was her condition. Her general health began to suffer. Her sleep and digestion became disturbed and at times she would have delirious attacks. For two years she was considered as a sufferer from sciatic neuritis and treated exclusively by internal medications, particularly by large doses of morphia.

Examination.—At that time the patient came under Dr. John M. Fisher's observation. When I was asked to examine her, the following condition was found: The patient was markedly emaciated and walked with great difficulty across the room. Station was uncertain and especially with closed eyes. Further examination revealed a tenderness of the upper portion of the sciatic nerve and particularly below the posterior superior spine of the ilium. The pain extended upward toward the left iliosacral articulation. In fact, the entire posterior portion of the left iliac region with the adjoining portion of the sacrum was quite painful. In addition to the continuous pain there were also paroxysms of sharp, lancinating, spontaneous pain down along the posterior aspect of the entire left leg. The least motion, and especially extension of the leg, increased the suffering. There were also sensations of numbness, tingling and formication in the legs. As to the objective sensibility, the following phenomena were observed: There is a longitudinal band of complete anesthesia to touch, pain, pressure and temperature along the external border of the left leg (see illustration) beginning from the trochanter down to the foot and occupying the dorsal and plantar surfaces of the foot and the last three toes. The remainder of the leg presents a marked diminution of sensation, but not a complete abolition. The gluteal region is also hypesthetic. No disturbed sensation is observed in the perineal region. The left knee-jerk and the Achilles tendon reflex are markedly exaggerated. The musculature of the leg was very flabby, and although the patient's entire musculature was reduced in size, nevertheless the disturbed nutrition was more evident in the left leg than in the right. The affected leg is decidedly colder than the right. The sphincters of the patient were intact, as there was no disturbance of their function.



Figures showing areas of complete and partial anesthesia; solid black portions showing anesthesia and shaded portions showing hypesthesia.

Diagnosis.—The symptoms thus described presented apparently a clear picture of sciatica, but the character of the pain and its extension toward the upper portion of the iliac bone and the corresponding portion of the sacrum, and, finally, the objective sensory disturbance mentioned above, altered greatly the symptom group of the classical sciatic neuritis and suggested a possibility of a larger involvement than merely that of the sciatic nerve trunk. When the patient was placed flat on her abdomen there was at first glance nothing abnormal noticeable, but a close inspection and palpation revealed a slight but undoubted inequality of the right and left sides of the lower portion of the sacrum. The left side was somewhat larger and thicker and pressure on it caused pain. A control examination was made through the rectum and here the above difference could be felt still more readily. It was therefore evident to me that the enlarged and thickened left portion of the sacrum exercised pressure on the posterior division of the lumbar and sacral nerves and the left sacral plexus. The latter is formed by the lumbosacral cord, the anterior divisions of the three upper sacral nerves and part of the fourth. It is triangular in form, its base corresponding with the exit of the nerves through the anterior sacral foramina, its apex with the great sacrosciatic foramen. The sacral foramina are situated laterally at the end of transverse ridges seen between the separate pieces of the sacrum.

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[2] Presse Médicale, 1904, No. 80.

The posterior primary divisions of the lumbar and sacral nerves are distributed over the integument of the gluteal region. The branches of the sacral plexus supply the gluteal muscles, the pyriformis, obturator internus and quadratus femoris. Their function is to rotate the thigh outward; the gluteus maximus extends the hip-joint, the gluetus medius and minimus are abductors also, move the thigh forward and rotate it inward and backward. All these movements were somewhat reduced in my patient. Whether the weakness of the muscles was the direct cause of the slight impotence of the limb, or else the pain interfered with motion, was difficult to determine. As to the cutaneous branches of the sacral plexus, only some of them were involved. The small sciatic was only partly affected, as the long pudendal nerve was intact. The sensibility of the perineum and of the labia majora was normal. The anesthesia of the limb corresponds to the first and second sacral nerve roots. The hypesthesia corresponds to lumbar nerve roots.

A careful analysis of the sensory distribution shows that the following nerve roots are affected: First, second, third and fourth lumbar and second sacral.

Operation.—In view of the findings in the bony tissue, which were sufficient to account for the symptoms referable to several nerve roots, operative procedures were indicated. Dr. E. G. Montgomery, who performed the operation, has kindly supplied me with the following report: "Through an excision extending across the lower end of the sacrum and coccyx from the left to the right side, the coccyx was exposed and removed, then the tissues pushed off from the inner surface of the sacrum and with the rongeur the lower portion of the bone was removed, when we opened into a pulpy mass which consisted largely of disintegrated bone. This was beneath and did not involve the periosteum covering the anterior surface of the sacrum. This tissue was worked away with a rongeur and curette until about one and one-half to two inches of the lower and middle portion of the sacrum was removed. The cavity was then packed with iodoform gauze and the greater portion of the external wound closed."

Tissue Examination.—The removed tissue was sent to the patient's former physician in Brooklyn and Dr. A. S. Wolf of the laboratory of pathology, bacteriology and chemistry sent us the following report: "The tissue is composed principally of glandular tissue lined with columnar epithelium. The acini are well enclosed by a connective tissue reticulum with the tendency of breaking down or extension. Epithelial cells and connective tissue cells show no infiltration and no degeneration. The specimen throughout gives no tubercular picture. The specimen appears to be cylindrical epithelioma originating from misplaced embryonic tissue."

Subsequent History.—The operation was followed by gradual improvement in the general condition and considerable relief from pain. The healing of the wound was very slow, but the pain became progressively less. At the end of a month there was very little complaint of pain. The former tender spots along the sciatic nerve became less sensitive. The patient was then taken back to her home in Brooklyn and placed in charge of her family physician. His first reports were excellent. The patient was practically free from pain and she gained in weight. Unfortunately the improvement was only temporary. Gradually the pain returned and even with greater severity in the region of sacroiliac articulation. Large doses of morphia had to be used. The patient finally died in a state of complete exhaustion. No autopsy was obtained.

Case 2.—Mrs. H. S., aged 35, has been suffering for eighteen months from pain in the areas of distribution of both sciatic nerves and in the sacral region.

Examination.—A careful examination revealed some symptoms of double sciatica, viz., pain in walking, pain on extension of both legs, tender spots between the ischium and the trochanter and in the middle of the calf muscles. She also had spontaneous pain along the posterior aspects of the legs, more on the right than on the left side, but the pain in the sacrum was of unusual severity. Both gluteal regions were highly hyperesthetic and the patient had difficulty in walking. The knee-jerks and the Achilles tendon reflex were markedly exaggerated. There was no other abnormal reflex. The sphincters were intact. The muscles of the lower limbs were much wasted and flabby, but there was also a general wasting of the musculature of the entire body.

Diagnosis.—With a singular similarity the objective sensory disturbances were those of the first case, excepting a somewhat larger band of anesthesia extending more anteriorly than posteriorly and more in the right limb than in the left. The hypesthesia covered the remainder of both limbs except the gluteal regions, which, as said above, were hyperesthetic. The difference between the two cases was only in the extent of the involvement. In the first case the affection was unilateral, in the second bilateral. Here again the symptoms pointed to some irritative process going on not in the trunk of the sciatic nerve, but above in the lumbar and sacral roots. To avoid repetition one can refer to the history of the first case as to the details of individual nerves involved. The character of the pain in the sacral region was identical with that of our first patient.

Operation.—The patient was considered for eighteen months a sufferer from sciatica and treated exclusively with internal medications. A pelvic examination made by Dr. J. M. Fisher excluded any pressure from that source. I then made the diagnosis of a disease of the sacrum and perhaps of lumbar vertebræ with secondary involvement of lumbar and sacral roots probably through irritation. I then learned that the patient had several years ago one breast removed for some malignant growth. Her general appearance was cachectic and therefore suggested a malignancy of the bony tissue of the sacrum. As in the first case, I advised an operation, which was performed by Dr. Fisher.

Tissue Examination.—The specimen removed by him was examined in the pathologic laboratory of the Jefferson Hospital, and the report is as follows: "The triangular piece of tissue measures each side 4 cm. and the base 3 cm. The tissue is hard and bone-like and on the outer aspect is a small amount of bright red soft tissue. The periosteum is intact. At the base the bone is somewhat lacerated. The medullary portion contains a small amount of rather firm, dark red tissue. The soft tissue is made up of rather loosely woven fibrosa which is wavy, intensely stained and contains numerous cells, some spindle-shaped, others round. They stain fairly well. At some points the sections are cellular, the elements being large and ovoidal. The nuclei are ovoidal, vesicular, and contain very little chromatin. The protoplasm is rather abundant, granular and transparent. Throughout the sections are small areas containing large cells which are ovoidal, vary from 15 to 25 microns in diameter, and contain more than one nucleus. The protoplasm is rather dense and hyalin. In some parts of the section is a basic staining substance containing granular bodies. The bone presents similar changes. Diagnosis: Giant-cell sarcoma."

Subsequent History.—The operation brought some relief from pain. Patient began to recuperate and progressed fairly well, when a recurrence of pain took place. This time the pain was concentrated in the sacral region and from there gradually ascended along the spine. Her sufferings became intense. The general cachectic condition became more and more pronounced. At the end of two months the patient expired. No autopsy was obtained.

IMPORTANT FEATURES

The two cases present very important features.

1. From an etiologic standpoint the involvement of the sacrum was the direct cause of the sciatic symptom group.

2. The predominance at first of the sciatic pain over the sacral pain, but later the reversed condition.

3. The error to which the latter circumstance led, viz.: the affection was considered for an ordinary case of sciatica and therefore the sacral pain was overlooked and consequently operation delayed with disastrous results.

4. Not one of the cases presents a complete picture of the classical sciatica. While spontaneous pain was present along the limb, some of the tender spots could be brought out and overextension of the leg caused great discomfort; nevertheless, the anesthesia, the hypesthesia in the limb, and in the gluteal region all pointed to a lesion above the sciatic nerve. An exact study of the sensory disturbance led to the localization of the affection in the nerve roots of the spinal cord. The latter, in its turn, directed attention to the cause of the root irritation and a material factor was discovered in the vertebræ. We had, therefore, to deal with a root condition simulating sciatica, viz.: a radicular sciatica.

5. The two cases are instructive from this standpoint, that they show the necessity of making thorough and very careful investigations of patients who come under observation even with the most common pathologic conditions.

In connection with the latter remark I wish to mention another case seen in consultation with Dr. Wayland in Crozet, Va.

A middle-aged woman suffered severe pains in the legs, particularly in the areas of distribution of the sciatic nerves. Prior to Dr. Wayland's treatment she was considered to be a sufferer from double sciatica. Accordingly, the two nerves were stretched and other surgical manipulations performed on the nerves. When Dr. Wayland first saw her, he suspected more damage than only in the sciatic nerves. When I saw the patient, she presented all the symptoms of a spinal cord tumor, viz., very severe pain in the mid-thoracic region, radiating around the waist, total paralysis with loss of all the reflexes, total loss of sensations below the waist line, incontinence of the bladder and rectum. The outlook was most grave, as the disease had been of two years' standing. The patient died in two months.

CONCLUSIONS

The three cases related belong to the domain of surgery. No doubt, when taken in the proper time, surgery probably could have prolonged life.

The conclusion that forces itself on us is the fact that sciatica which is persistent and which is accompanied also by pain in regions other than the great ischiosacral notch, is to be looked on with suspicion, especially when the pain is spontaneous and not exclusively on motion. Such cases should be carefully analyzed, not only as to the objective sensory and motor disturbances, but also as to the condition of the pelvic organs and the bony structure with which the nerve roots are in close touch.

FAT: A PHYSIOLOGIC APPRECIATION

GEORGE M. NILES, M.D.
Lecturer on Physiology, Atlanta School of Medicine; Gastro-enterologist to the Tabernacle Infirmary
ATLANTA, GA.

The rôle of fat in the human organism may be considered as material, esthetic, and psychic. The first may be physiologic, pathologic, or economic in its aspect; the second may mark the difference between the rounded anatomic contour, displaying at its best the human form divine, the beauteous Venus, the plump Cupid, and the haggard ugliness shown in emaciation, or in the stage of the "shrunk shank" and "the lean and slippered pantaloon."

The psychic manifests its influence over the temperament and disposition from earliest infancy throughout life, and I shall endeavor to prove that in this particular the rôle of fat has not received sufficient consideration.

Protein, that prolific source of animal energy and vigor, needs no advocate to plead its rights, for by its very nature the *protein content* will always command a liberal share of attention. Fat, however, is often unappreciated, often misunderstood, and more often unjustly blamed for sins or delinquencies of other food products, so that a general survey of this subject, possibly more discursive than scientific, commended itself to me as being of probable interest.

From 15 to 20 per cent. of each healthy body is composed of fat, though only about one-fourth of an ounce is contained in the blood. The amount of fat within normal limits varies widely, often being influenced by heredity, age and personal habit more than the quantity of food taken. Where there is a tendency to take on fat, it readily accumulates under either a slight increase of the daily diet or a decrease of regular exercise. The storage of fat is also favored by sleep, as it has been shown during periods of somnolent inactivity fatty deposits most readily find snug and convenient resting places.

The chief sources of fat are the starches and sugars, though certain fats are directly utilized. Emulsified fat is split to a considerable extent by the stomach steapsin, an enzyme which acts efficiently only when concentrated. It might be well to mention that pepsin has not been shown to possess any fat-splitting action.

As the fat is carried past the pyloric outlet, it is immediately acted on by the pancreatic juice, and, until recently, it was generally assumed that it was partly broken down by the pancreatic secretion into fatty acids and glycerin; that the former united with the alkalies of the intestines to form soaps, and that the soaps brought about an emulsification of the fat. On account of its alkalies, bile was said to play an important part. Unlike other nutritive substances, fat would then pass from the intestinal canal into the mucous membrane, not in solution, but as an emulsion. The weight of present opinion, however, would lead us to believe that fats are completely decomposed in the intestine, and that the fatty acids formed are absorbed either as soaps or in a solution brought about by the bile.

As a source of energy for the development of heat, fat may be described as quickly available, but not so lasting. Experiments of both Rubner and Atwater have demonstrated that food-stuffs generate the same quantity of heat when burned within the body as when burned outside the body, and that, while one gram of protein or one gram of carbohydrate will each generate approximately four calories, one gram of fat is good for over nine calories. The conclusion, therefore, is obvious that by its concentrated fuel power fat preserves other tissues, especially the albuminous, from destruction by oxidation and is valuable as a reserve force, instantly available when any vital emergency requiring it arises.

Another material function of fat is that of "protein sparer," for, though its tissue-building properties are limited and incidental, by its presence the protein is permitted better to perform its manifold tasks. We might with propriety, in this connection, liken fat to the housewife, who, though not apparently earning anything, by her care and industry conserves the fruits of her husband's labor, enabling him not only to support the domestic establishment, but also to lay aside a surplus. Should an emergency arise whereby the head of the house becomes incapacitated, this housewife could at once become an active earning factor, augmenting the depleted income and possibly averting economic disaster.

As a storage of energy ready to be drawn on as needed fat is of great importance. In starvation about 90 per cent. of the body fat is consumed before death, so we can easily see how a generous physiologic supply laid up for a time of stress will aid in a battle against wasting disease or defective assimilation. Fat also, though generally burned rapidly, is used very slowly when there is little muscular activity, as shown by animals in hibernation.

The last material use of fat is to serve as a covering and protection to the body against both injury and cold; in other words, to cushion the frame. Fat babies can bear without hurt falls that would seriously injure thin ones; fat people can stand with impunity many hard knocks that would completely demoralize attenuated individuals, while a good blanket of subcutaneous adipose tissue will answer every purpose that could be expected of woolen underwear or heavy clothing.

From an esthetic standpoint, the physiologic and orderly distribution of fat in the connective tissue marks the contrast between physical beauty and gaunt ugliness. Painters, novelists and dramatists have been quick to note the difference, and in their delineations of physical charm emaciation never finds a place. On the contrary, the villain as most often described is a cadaverous-looking wretch, with peaked nose, lantern jaw and skinny limbs. Should fat be present by any chance, it is pictured in pathologic and disgusting quantities. In fact, history, literature and art are full of examples demonstrating that in the entire animal kingdom there can be no comeliness in the absence of fat.

That fat will accumulate in unused portions of the body while it disappears in regions of local activity has been utilized by directors of physical culture as well as "beauty doctors" the world over. Various forms of exercise, both systematic and scientific, have been devised, besides numerous appliances, all aiming to increase or decrease fatty deposits in different parts of the human anatomy. By exercise alone some forms of obesity may be corrected, while abdomens of aldermanic proportions can readily be abated. There are also ingenious methods by which too prominent angles, as well as unsightly hollows, may be cushioned or filled with fat, so that to the earnest seeker of physical attractiveness, in the absence of serious wasting disease, there is nearly always "balm in Gilead."

In considering the psychic rôle of fat, we should specially bear in mind its reserve function in relation to active vital processes. In the proper conduct of the human mechanism there is just the right amount of labor for each organ to perform, but generous Nature allows sufficient latitude within physiologic limits to meet ordinary emergencies. Extraordinary conditions unless fortified against may result disastrously, and a liberal deposition of fat is one of Nature's wise precautions.

It has been commonly known from the earliest antiquity that fat people are more contented, more optimistic, than lean ones and that their viewpoint of life in general is largely governed by this prosaic attribute. Now I might compare the supply of fat to the ample bank account of a busy and provident man. That he possesses this surplus does not prevent him from diligently following his usual avocation, but the knowledge of its presence and that it can be instantly obtained lends a mental satisfaction that would be absent were he living right up to his daily income.

I believe, therefore, that my reasoning is correct when I assert that a physiologic reserve of fat by its very presence exerts a quieting and reassuring influence on the vital forces most concerned in constructive metabolism; and, if I may apply a scriptural quotation, this reserve, in language intelligible to those forces, says: "Thou hast much goods laid up for many years; take thine ease, eat, drink and be merry."

On the other hand, when the department of constructive housekeeping in the body is furnished barely enough to ward off retrograde metamorphosis; when obscure nooks and recesses have to be frequently ransacked for their scanty stores of fat in order to keep up normal oxidation; when nutrition is at par only a part of the time, while the protein content has to work overtime in order to manufacture sufficient energy and heat, then is felt the vibrations of a tiny voice of unrest and bodily discontent, which discontent and unrest sooner or later react on the disposition, developing into that pessimism and temperamental dissatisfaction so often present in lean people.

The limits of this paper will not permit a discussion of the dietetics of fat, a comparison of its vegetable and animal forms, or its adaptability to different conditions, as age, occupation or environment. Let this be considered rather a physiologic appreciation of that food element, which, lacking the strenuous qualities of protein, the versatility of the carbohydrates, or the leavening functions of the inorganic salts, fulfills a manifold mission of its own, lending to the body warmth and security, to the mind peace and good cheer.

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VACCINATION AND ITS RELATION TO ANIMAL EXPERIMENTATION *

JAY FRANK SCHAMBERG, M.D.
PHILADELPHIA

(Concluded from page 951)

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The countries which during this period have the most stringent vaccination laws suffer the least smallpox, namely, Germany, Denmark. Sweden and Norway.

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IMMUNITY OF VACCINATED PHYSICIANS, NURSES AND ATTENDANTS IN SMALLPOX HOSPITALS

If it can be demonstrated that physicians, nurses and attendants in smallpox hospitals can be perfectly protected by vaccination, then this must be regarded as a crucial test of its protective influence; for if these persons, living in the same atmosphere with scores or hundreds of smallpox patients, breathing their very exhalations, are enabled to escape the infection, it certainly should be possible for others much less exposed to acquire similar immunity.

Experience shows that physicians, nurses and attendants, if recently successfully vaccinated or revaccinated, may live in smallpox hospitals in perfect safety. Dr. Marson, physician to the Smallpox Hospital of London for many years, giving evidence in 1871, stated that during the preceding thirty-five years no nurse or servant at the hospital had been attacked with smallpox. Dr. Marson took the precaution of revaccinating all attendants before permitting them to go on duty. Dr. Collie, whose experience is also large, says: "During the epidemic of 1871, out of one hundred smallpox attendants at Homerton (England) all but two were revaccinated, and these two took smallpox." Dr. T. F. Ricketts, medical superintendent of the smallpox hospital ships on the Thames, states that out of 1,201 persons in attendance on board the smallpox ships, only six contracted the disease, all of them recovering. None of these six persons had been successfully revaccinated before going on duty. According to Dr. Hill, of Birmingham (England), during the epidemic of 1893, over one hundred persons were employed at the City Smallpox Hospital, all of whom had been recently revaccinated; not one of them contracted smallpox.

Dr. William M. Welch, of Philadelphia, states that in the Municipal Hospital of Philadelphia during a period of thirty-four years, in which time almost 10,000 cases of smallpox were treated, there was no instance of a physician, nurse or attendant who had been successfully vaccinated or revaccinated prior to going on duty contracting the disease.

PHYSICIANS AND NURSES NOT PROTECTED AGAINST OTHER CONTAGIOUS DISEASES

Physicians and nurses do not exhibit immunity toward other contagious diseases as they do with respect to smallpox. According to Ernest Hart, in 1893, of 2,484 persons employed in the Metropolitan Fever Hospital of London, 130 became infected and 2 died. Four assistant medical officers, 10 nurses, 43 assistant nurses, and 16 maid servants were attacked by scarlet fever. Two assistant medical officers, 6 nurses, and 15 assistant nurses contracted diphtheria.

While the deaths from smallpox of physicians (who constitute a class particularly well vaccinated) are but 13 per million, in England, the deaths of the general population are 73 per million. In scarlet fever, on the other hand, against which physicians have no special protection, the figures are reversed: 59 medical men per million die of scarlet fever, as against 16 per million of the general population.

ALLEGED DANGERS OF VACCINATION

Every human act is accompanied by some measure of danger. When one rides in an elevator, in a railroad car, or even promenades on the sidewalk, he takes a certain definite risk which can be mathematically calculated. While in the aggregate the number of accidents and deaths from each of these causes may be considerable, yet the individual risk is so small that it may be disregarded. It is the same with reference to vaccination.

Inasmuch as vaccination necessitates the production of an abrasion or wound, it is naturally liable to infections to which wounds from other causes are subject. Such a four calories, one gram of fat is good for over nine calories. The conclusion, therefore, is obvious that by its concentrated fuel power fat preserves other tissues, especially the albuminous, from destruction by oxidation and is valuable as a reserve force, instantly available when any vital emergency requiring it arises.

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* This article is here considerably abbreviated. The complete article is one of a series of pamphlets issued by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Twelve of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, surgery, internal secretions; protozoan tropical diseases, etc.

[12] Kübler: Geschichte der Pocken und der Impfung, 1901, p. 383.

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IMMUNITY OF VACCINATED PHYSICIANS, NURSES AND ATTENDANTS IN SMALLPOX HOSPITALS

If it can be demonstrated that physicians, nurses and attendants in smallpox hospitals can be perfectly protected by vaccination, then this must be regarded as a crucial test of its protective influence; for if these persons, living in the same atmosphere with scores or hundreds of smallpox patients, breathing their very exhalations, are enabled to escape the infection, it certainly should be possible for others much less exposed to acquire similar immunity.

Experience shows that physicians, nurses and attendants, if recently successfully vaccinated or revaccinated, may live in smallpox hospitals in perfect safety. Dr. Marson, physician to the Smallpox Hospital of London for many years, giving evidence in 1871, stated that during the preceding thirty-five years no nurse or servant at the hospital had been attacked with smallpox. Dr. Marson took the precaution of revaccinating all attendants before permitting them to go on duty. Dr. Collie, whose experience is also large, says: "During the epidemic of 1871, out of one hundred smallpox attendants at Homerton (England) all but two were revaccinated, and these two took smallpox." Dr. T. F. Ricketts, medical superintendent of the smallpox hospital ships on the Thames, states that out of 1,201 persons in attendance on board the smallpox ships, only six contracted the disease, all of them recovering. None of these six persons had been successfully revaccinated before going on duty. According to Dr. Hill, of Birmingham (England), during the epidemic of 1893, over one hundred persons were employed at the City Smallpox Hospital, all of whom had been recently revaccinated; not one of them contracted smallpox.

Dr. William M. Welch, of Philadelphia, states that in the Municipal Hospital of Philadelphia during a period of thirty-four years, in which time almost 10,000 cases of smallpox were treated, there was no instance of a physician, nurse or attendant who had been successfully vaccinated or revaccinated prior to going on duty contracting the disease.

PHYSICIANS AND NURSES NOT PROTECTED AGAINST OTHER CONTAGIOUS DISEASES

Physicians and nurses do not exhibit immunity toward other contagious diseases as they do with respect to smallpox. According to Ernest Hart, in 1893, of 2,484 persons employed in the Metropolitan Fever Hospital of London, 130 became infected and 2 died. Four assistant medical officers, 10 nurses, 43 assistant nurses, and 16 maid servants were attacked by scarlet fever. T[illegible]o assistant medical officers, 6 nurses, and 15 assis[illegible]nt nurses contracted diphtheria.

While the deaths from smallpox of physician[illegible] (who constitute a class particularly well vaccinated) [illegible]e but 13 per million, in England, the deaths of the [illegible]neral population are 73 per million. In scarlet fever, o[illegible] the *other hand*, against which physicians have no
protection, the figures are reversed: 59 me
million die of scarlet fever, as against
the general population.

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* This article is here considerably abbreviated. The complete article is one of a series of pamphlets issued by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Twelve of these pamphlets are now ready, taking up the relations of animal *experimentation* to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, surgery, internal secretions; protozoan tropical diseases, etc.

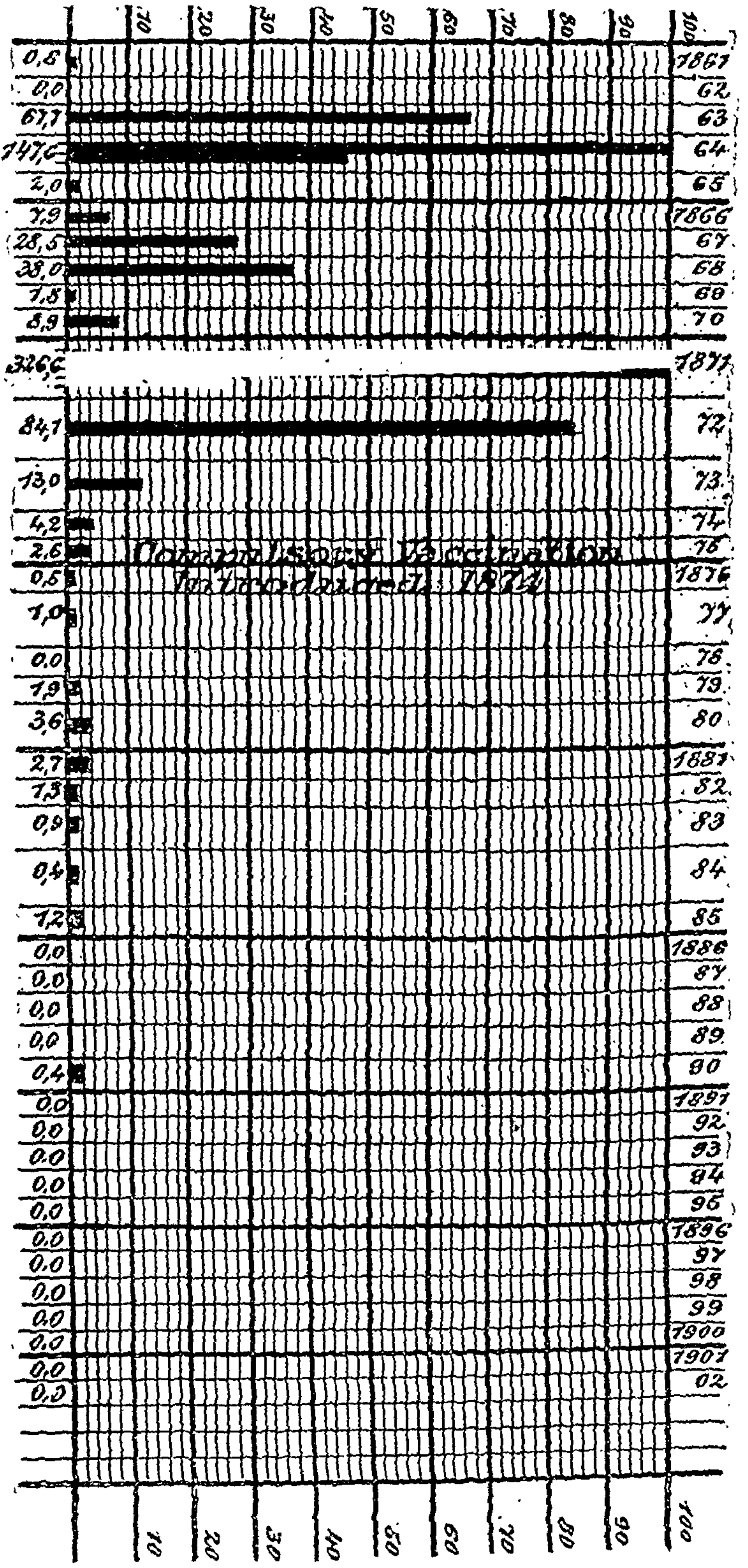
12. Kübler: Geschichte der Pocken und der Impfung, 1901, p. 383.

lated within recent decades by the proof that a most intimate relationship exists between vaccinia and smallpox. Indeed, it has been demonstrated that the intensely contagious virus of smallpox can be transformed into the benign vaccine virus, the latter having the property of protecting against smallpox when inoculated into the human subject. Moreover, the affection produced by the vaccine virus, unlike that produced in the last century by inoculation of smallpox virus, results in a disorder which is *non-contagious*. This proof of the relation between vaccinia and smallpox has been brought about through animal experimentation carried on through many years by scientific men in France, Switzerland, Germany and Great Britain.

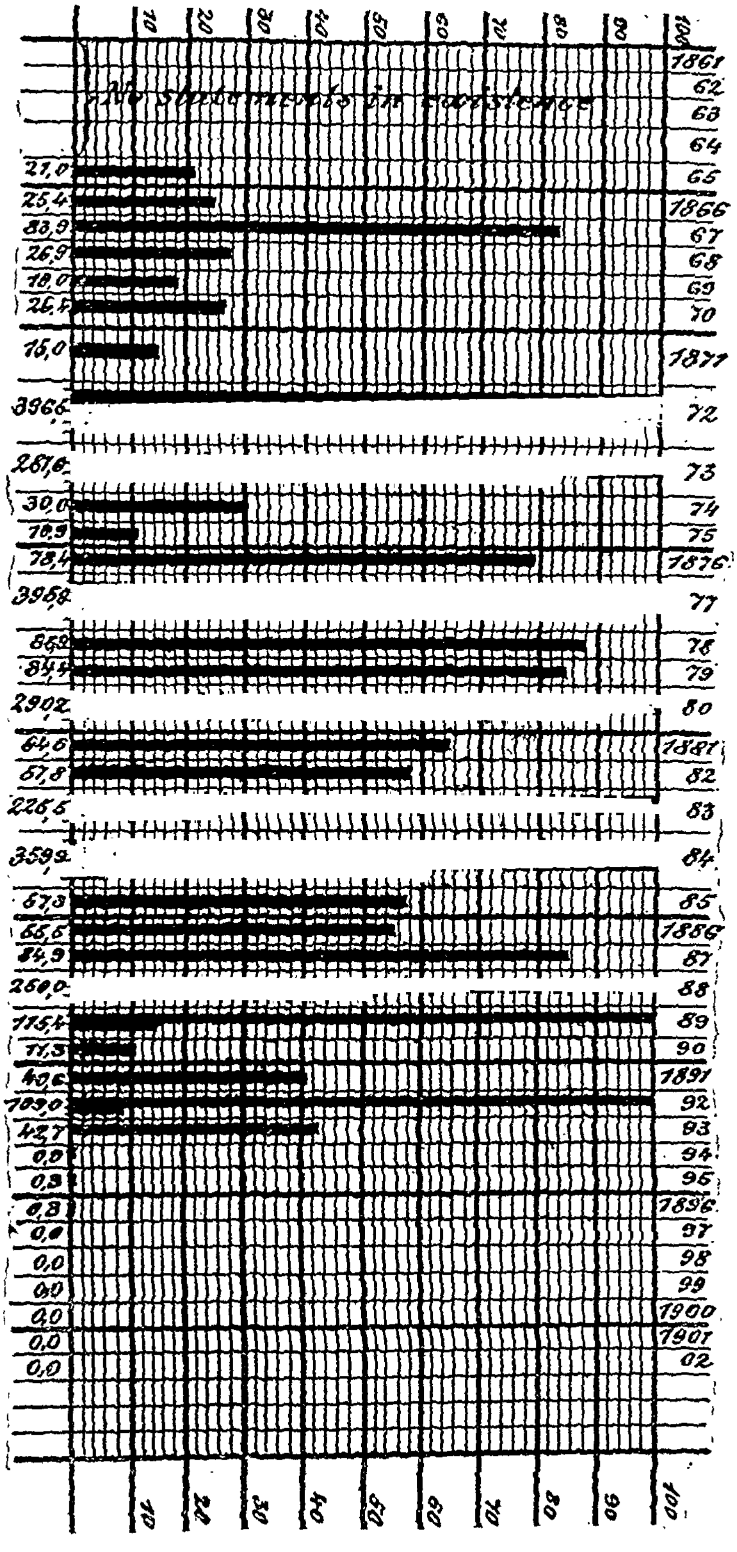
It has taken almost a century of experimentation to prove the truth of the statement made by Jenner in his first publication, that smallpox and cowpox were modifications of the same disease. What a tribute to the intuitive discernment of this great man!

THE VALUE OF THE ABOVE EXPERIMENTS

The demonstration of the proof that vaccine virus may be developed from smallpox virus is of the greatest importance to mankind. Cases of spontaneous cowpox, from which most strains of vaccine lymph were originally derived, are excessively rare. In Württemberg, in 1825, a reward was offered for the discovery of cases of spontaneous cowpox. There is a reassuring sense of security, therefore, in the knowledge that in a case of the



Dresden.—Smallpox Mortality Per 100,000 of Population.

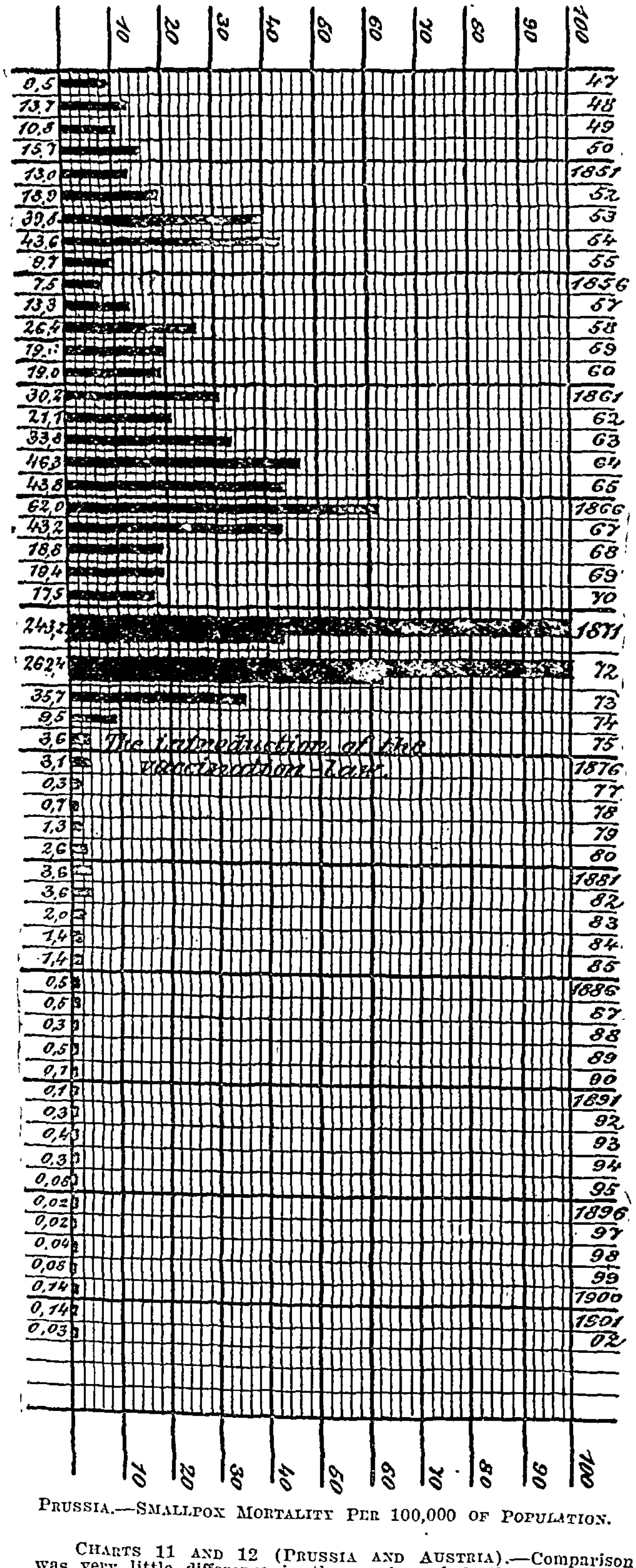


Prague.—Smallpox Mortality Per 100,000 of Population.

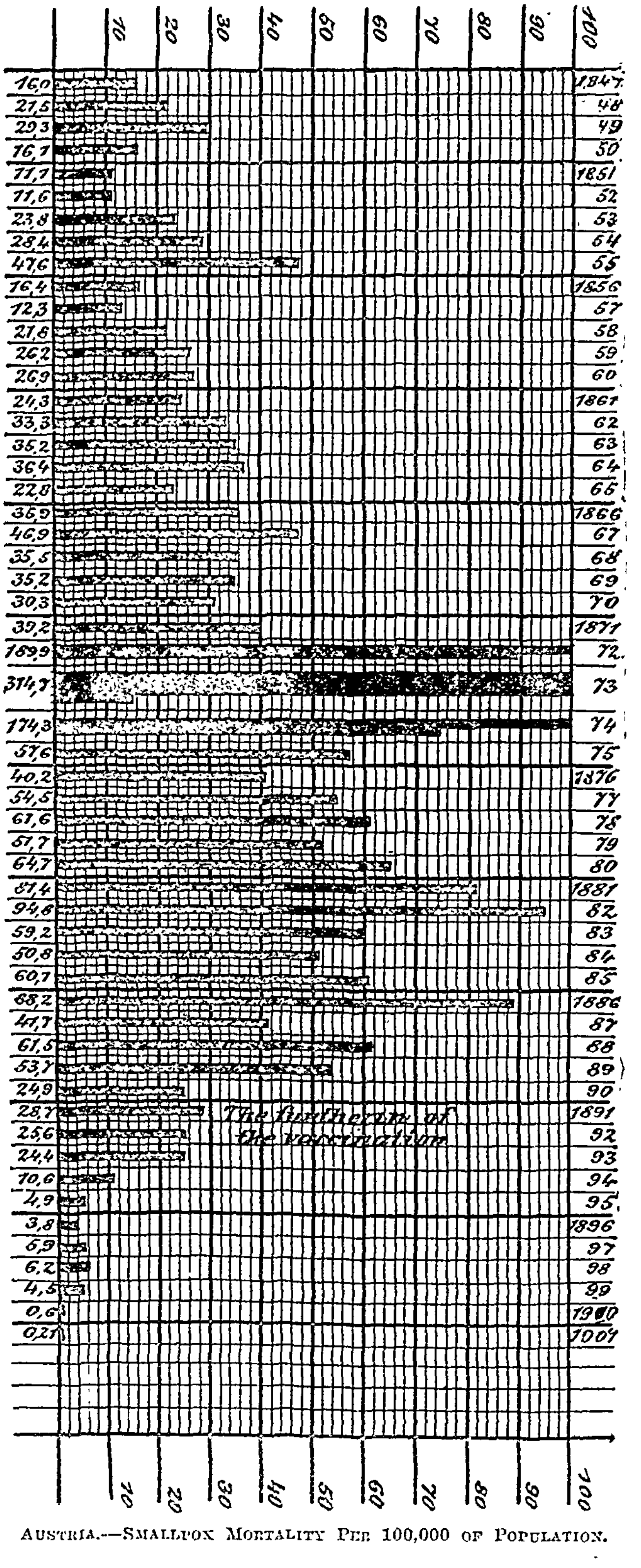
Charts 9 and 10 (Dresden and Prague).—Comparison of mortality from smallpox per 100,000 of population. In Dresden no compulsory vaccination before 1874; since then compulsory vaccination and revaccination. In Prague no compulsory vaccination.

loss or attenuation of existing strains of lymph a fresh source may be obtained by variolation of calves. It has long been known that vaccine lymph may degenerate by too prolonged transmission through the human species. In years gone by the cry was often heard, "Back to the cow."

Again, in the event of a vaccine famine such as occurred in 1871-72, or in an extensive epidemic of smallpox in some inaccessible country where vaccine material could not be secured, the ability to convert the smallpox virus into vaccine virus by inoculation of calves would offer the means of suppressing the epidemic.



Prussia.—Smallpox Mortality Per 100,000 of Population.



Austria.—Smallpox Mortality Per 100,000 of Population.

Charts 11 and 12 (Prussia and Austria).—Comparison of mortality from smallpox during the years 1816-1902. There was very little difference in the number of deaths from the disease in the two countries as long as compulsory vaccination had not been introduced; since the enactment of the German vaccination law in Prussia, however, the mortality there has sunk to a previously unknown figure, whereas it has remained stationary and at the same high rate in Austria for many years. Up to 1889 the mortality from smallpox in the latter country was on an average greater than it was before the epidemic in 1872, and it is only since 1890 that favorable conditions have again prevailed, although the losses from smallpox have remained greater during recent years than in Prussia.

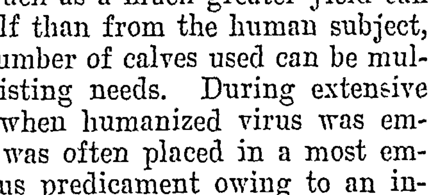
ADVANTAGES OF BOVINE VIRUS OVER HUMANIZED VIRUS

1. About a quarter of a century ago it was the common practice to employ for vaccination the fluid or the dried crust from the vaccine lesion on a child's arm. While such vaccinations gave satisfactory results as regards protection against smallpox, they were attended with certain disadvantages which are obviated by the use of bovine lymph. The use of calf-propagated virus precludes the possibility of transmitting by vaccination diseases peculiar to the human species. One of the most weighty reasons that led to the adoption of animal vaccination and to its preference over arm-to-arm transmission was the recognition of the possibility of inducing syphilis by vaccine inoculation. To be sure, such accidents were so rare that thousands on thousands of physicians vaccinating throughout a lifetime failed to encounter any such unfortunate experience. Nevertheless, no matter how uncommon such a catastrophe might be, the remotest liability of such an occurrence constitutes a serious argument against the use of humanized virus. The opponents of vaccination bitterly attacked the procedure on the grounds just mentioned. The bovine species being totally insusceptible to syphilis, the use of lymph of calf origin is entirely devoid of the danger of transmitting syphilis. The weightiest argument of those who have antagonized vaccination is, therefore, nullified. Erysipelas appears to be a much rarer complication since the general employment of animal virus.

2. The virus of calves offers an almost inexhaustible supply of lymph, inasmuch as a much greater yield can be obtained from the calf than from the human subject, and, furthermore, the number of calves used can be multiplied according to existing needs. During extensive epidemics of smallpox when humanized virus was employed, the community was often placed in a most embarrassing and dangerous predicament owing to an insufficient supply of vaccine lymph. During the great pandemic of smallpox that spread over the entire globe in the early seventies a veritable vaccine famine existed in many countries. All kinds of sources were drawn on for virus, and much worthless lymph derived from spurious and irregular vaccinations was employed, with entirely unsatisfactory results.

3. Animal lymph appears to give a much larger percentage of successful revaccinations than long-humanized virus. Dr. Henry A. Martin says:

> The number of those who in revaccination with old, long-humanized virus (not that of early human removes) experience vaccinal effect may be stated at the outside at 35 per cent. The number of those revaccinated with equal care and repetition with animal virus and virus of very early human removes, I affirm to be a fraction over 80 per cent.—a difference of 45 per cent.; and this 45 per cent. I firmly believe to represent approximately the number of those insensible to the ef[illegible]
> fluence of long-humanized virus, but s[illegible]
> contagion of variola just in the same
> intense power of bovine virus and
> removes from it.



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The cowpox accid
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It has been alleged by the opponents of vaccination that tuberculosis has been and is transmitted by the use of calf virus. The precautions which are adopted in the propagation of vaccine virus make such an accident almost an impossibility. Even were this not the case, it is very doubtful whether an inoculation of virus contaminated with the tubercle bacillus would produce more than a local skin lesion which could be readily cured. The precautionary measures employed are, as has been said, an all-sufficient safeguard. The virus is obtained from very young calves, and it is pretty well established that calves are but rarely the subjects of tuberculosis. It is stated by Fürst,[19] on the authority of Pfeiffer, that but one case of tuberculosis was found among 34,400 calves under four months of age. The statistics of the abattoirs of Augsburg and Munich corroborate the above figures; only one tuberculous calf was discovered at Augsburg among 22,230 slaughtered, and the percentage was much smaller at Munich.

Furthermore, in all well-regulated establishments for the propagation of vaccine virus, the calves are subjected for a number of days prior to vaccination to the tuberculin test; in the event that tuberculosis is shown to exist in the animal, it is, of course, not employed for vaccination. All calves used for vaccination are autopsied and carefully examined before the virus obtained from them is placed on the market. Finally, even though it were possible, despite these precautions for the tubercle bacillus to contaminate the lymph, it would perish if the virus were glycerinated. Nearly all of the vaccine lymph now employed is subjected to the process of glycerination. Copeman,[20] speaking of glycerinated lymph, says:

> The tubercle bacillus is effectively destroyed even when large quantities of virulent cultures have been purposely added to the lymph.

EXPERIMENTAL RESEARCHES ON MONKEYS

A number of observers, including Zuelzer, Copeman, De Haan, Roger and Weil, Park, Ewing, and Councilman, McGrath and Brinckerhoff, have shown that it is possible to inoculate certain species of monkeys with smallpox, producing in them a mild affection similar to inoculated smallpox formerly induced for protective purposes in man. This inoculation protects the monkey against subsequent successful inoculation and likewise against vaccination. Monkeys are only slightly, if at all, susceptible to smallpox contracted in a natural way through the air. Professor Councilman, of Harvard University, and his associates allege that they have discovered the parasite which causes smallpox, the same
organism [illegible] modified being held to be present in
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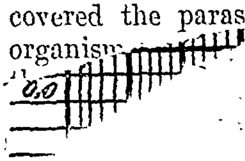

[illegible] AND CONCLUSIONS

[illegible] AND SMALLPOX

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2. Vaccination protects against smallpox in the same manner that one attack of the smallpox protects against a second attack. Vaccination has the special advantage in that the immunity which it confers against smallpox may be renewed when it becomes impaired or exhausted.

3. Vaccination in order to confer protection must be genuine: the mere production of a "sore arm" is of itself no proof that the subject has been successfully vaccinated. The vaccination must run a definite course before a protective substance is left in the body.

4. Smallpox may develop in vaccinated persons if they permit years to elapse without revaccination.

5. Vaccination and revaccination universally applied are capable of exterminating smallpox as an epidemic disease. The experience of Germany during the past thirty-five years proves this.

6. In isolated instances individuals in a generally well-vaccinated community may develop smallpox because their protection is imperfect as a result of the use of an inert virus or some other fault of technic. These cases, however, will never appreciably influence the prevalence of the disease in such a community.

7. Smallpox was an ever-present and terrible pestilence in the days before vaccination. In most civilized centers it is to-day a relatively rare disease. This change has been effected almost exclusively by vaccination. Epidemics of smallpox prevail from time to time when the spark of infection is introduced into the community and a sufficient amount of unvaccinated combustible material exists to lead to a general conflagration. In countries where vaccination is neglected, as in Persia, Asiatic Russia, etc., etc., smallpox is still a death-dealing scourge.

8. The foes of vaccination commonly refer to the infrequency of smallpox at the present day and to the remote liability of contracting the disease. They forget that the relative security which we now enjoy is the result of vaccination. This security can be made absolute or it can be largely destroyed according as vaccination and revaccination are generally employed or generally neglected.

9. The dangers connected with vaccination have been greatly exaggerated by the opponents of this measure. Vaccination causes an abrasion of the skin and in rare instances this wound, like other wounds may become infected, especially when neglected or maltreated. With the selection of a proper virus and care of the vaccination site during and after vaccination, the risk in any individual instance is an entirely negligible quantity. The risk connected with vaccination is infinitesimal compared with the peril of remaining unvaccinated.

THE RELATION OF ANIMAL RESEARCH TO OUR KNOWLEDGE OF SMALLPOX AND VACCINATION

1. Numerous experiments on calves have proved that smallpox virus may be converted into vaccine virus by transmission through several generations of the bovine species. This discovery not only establishes vaccination as a thoroughly scientific practice, but also provides for a new source of lymph in the event of the deterioration or loss of existing strains.

2. Experiments on calves have resulted in a method of calf vaccination which permits of the production of any needed quantity of virus. This renders unnecessary the use of humanized virus with the attendant disadvantages elsewhere referred to. The use of calves for the propagation of vaccine lymph constitutes the most important improvement in vaccination since its discovery over a hundred years ago.

1922 Spruce Street.

AN EXPERIMENTAL STUDY OF CERTAIN PHASES OF CHRONIC BACKACHE

A COMBINED GYNECOLOGIC AND ORTHOPEDIC INVESTIGATION *

EDWARD REYNOLDS, M.D.
AND
ROBERT W. LOVETT, M.D.
BOSTON

DEFINITION OF CLASS OF CASES UNDER INVESTIGATION

For an indefinite time the medical profession has been confronted with a very common and perplexing class of cases, mostly in women, but occasionally in men, in which persistent backache is the chief subjective symptom.

These cases present the following symptomatic picture: The pain, generally dull in character, is as a rule referred to the sacral or lumbar region and is frequently felt in one or both sacro-iliac joints; rarely it is complained of in the dorsal region. It also frequently shoots down one or both legs, in which case it is generally classed as "sciatica" and is aggravated by forward bending or flexion of the thigh with the knee extended. The pain in the back and leg are aggravated by standing, and especially by prolonged standing, such as is involved in the fitting of women's dresses. It is sometimes relieved by the recumbent position, but at times is at its worst when the patient rises in the morning. The pressure of the hand in the small of the back while sitting, or the use of a cushion in the same region in sitting or lying, are instinctive means of relief which every practitioner has seen these patients use. The pain is most often aggravated during menstruation and in general is either unilateral or bilateral, but in the latter case on close questioning is usually found to be worse on one side than on the other. Local tenderness may or may not be present. If the back is exposed and the finger-tips are placed over the erector spinæ muscles, perceptible spasm may be excited in these muscles by voluntary forward or lateral bending at the waist, and perfectly normal spinal mobility is unusual in the more marked cases. Bending is frequently better performed to one side than to the other. The nervous element in these cases may be slight, or so severe as to dominate the whole picture.

The condition sometimes originates from accidents, such as falls; it begins at other times as the result of overuse or strain, as in prolonged piano-playing, after heavy lifting, or after surgical operations. At other times it is found without assignable cause. The affection is exceedingly persistent and seldom very severe, and its most striking characteristic feature is the patient's insistence on a habitual pain for which no adequate cause is apparent. A search for that cause was the purpose of this investigation.

PRESENT TERMINOLOGY

The causes of this condition have been variously assigned by specialists and the general practitioner to the pelvic organs, to the muscles and joints, and to the nervous system. The uncertainty concerning its true

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* Portions of this paper were read in abstract before the American Gynecological Association in New York April 21, 1909, the American Orthopedic Association in Hartford, June 9, 1909, the Gesellschaft der ehemaligen Hoffa'schen Assistenten in Berlin, Sept. 6, 1909, and the Anglo-American Medical Association in Berlin, Sept. 11, 1909.

nature is expressed by the many names applied to the condition, of which the most common are the following:

Hysterical spine.
Neurasthenic spine.
Weak back.
Uterine backache.
Irritable spine.
Chronic lumbago.
Railroad spine.
Relaxation of the sacroiliac joints.

Among the laity the condition is often attributed to kidney disease.

Without denying the existence of cases in which this symptom is the result of diverse causes, such as actual uterine, spinal or sacro-iliac disease, we are inclined from the observations and experiments to be described to regard the term "static backache" as more truly descriptive of the majority of these cases. By which term we mean pain due to back strain incurred by an undue effort to maintain body balance under the conditions of the individual physiology.

ESTABLISHED TREATMENT

If the patient is a woman and any abnormality of her uterine system can be found, it is usually considered adequate reason for immediate treatment by the gynecologist. If some innocuous uterine peculiarity is operated on in order to cure a backache which is dependent on an overstrain of the back muscles, the results are not likely to be gratifying to the patient or to add much to the reputation of the surgeon who performs the operation. So, too, the orthopedic surgeon who devotes months of effort with apparatus and gymnastics to the relief of back strain caused by the faulty posture originated by inflamed pelvic organs is likely also to fail.

Outside of the gynecologic treatment, patients of either sex are treated by jackets, corsets, plaster strapping, splints, pads, springs, belts, massage, vibration, ymnastics. heat, electricity, etc. The application of h one of these measures is empirical and the method action of each is in general as little understood as the etiology of the condition for which it is used. If, instead of this blind work, a serious attempt is made to *investigate the causes of the condition and to study its* mechanics, it is possible that much confusion and many failures will be saved.

I. EXPERIMENTAL SECTION

REASON FOR PRESENT INQUIRY

The following experimental study, which has occupied us for the past three and one-half years, was undertaken because of the frequency with which one of us in gynecologic and the other in orthopedic practice met such cases of chronic backache, especially in women, and the study was made a joint one because we concluded that a consideration of the subject from our two different points of view would be more likely to be of use than two pieces of work done by each of us separately. No sooner had we started on our joint investigation, however, than we realized that neither of us had any exact comprehension of the causes or mechanism of the condition, matters which were evidently essential to any clear comprehension or study of the subject. We therefore turned to a study of the literature of the mechanics of the erect posture and found at that time little but vague statements, founded mostly on accepted authority rather than on observation of the living individual by reliable scientific methods. We were, therefore, obliged to begin our work by formulating for ourselves methods for the study of the mechanics of the maintenance of the upright position, and at the outset it became evident that any such study must start with a determination of the center of gravity of the body, and its relation to the supporting structures, because all lines of strain and all muscular balance depend obviously on such relations, and we desire here to express our indebtedness to Prof. Ira N. Hollis, of Harvard University, for advice generously given us on the mechanical side of our problem.

Our first two years and a half were, therefore, spent in a purely physiologic research, at the end of which time we had perfected an apparatus for determining the center of gravity in the erect living individual.[1] Up to the time of this, our contribution to physiology, there had existed, so far as could be learned from a study of literature, no reliable method of estimating the position of the center of gravity of the body in the upright position. Various loose statements as to its location are given in literature, and there are a few carefully formulated attempts to determine it by a study of the masses of the body post-mortem and their relation to each other, but scarcely any two writers agree as to what the erect normal posture should be.[2]

The method in previous use had been as follows: A cadaver was dismembered, the center of gravity for each arm and leg, the head and the trunk were separately obtained and, by a formula, the relation of these masses to each other in an ideal erect posture was calculated, and the center of gravity of the whole body in this posture was then located therefrom. From our observations we believe that the position of the center of gravity obtained in this way is misleading and untrustworthy for translation to the living, because the results obtained have failed so markedly to agree with the actual position of the center of gravity in the actual erect posture as obtained by us.

A study of the well-known method of Borelli for determining the center of gravity in the horizontal position suggested to us our method of determining the antero-posterior position of the center of gravity of the body in the standing posture; and the correlation of it to certain bony landmarks was easily added, as will be described.

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[1] Reynolds, E., and Lovett, R. W.: Method of Determining the Position of the Center of Gravity in Its Relation to Certain Bony *Landmarks in the Erect Position, Am. Jour. Physiol., May 1, 1909.*

[2] Borellius, J. A.: De Motu Animalium, Lugduni Batavorum, 1679.

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AUTHORS' METHOD OF DETERMINING THE CENTER OF GRAVITY IN THE ERECT POSITION

On the platform of a dial scale registering up to 100 pounds is placed a sharp edge which supports one end of a flat board (B), the other end of which is supported by a similar sharp edge placed on a rigid block (C). The distance between the edges is 508 mm. (20 inches). A short distance behind the rigid block is placed an upright post (E) with a horizontal sliding arm (D, shown in section only), which furnishes a plane of reference from which the antero-posterior position of each of the important landmarks of the body can be determined by measuring their horizontal distance from this sliding arm.

The determination of the antero-posterior position of the center of gravity in the standing subject is made as follows:

The subject is weighted on an ordinary set of scales. He is then placed on the balance plane (B) at a known point facing the scales. (The exact point is unimportant, but after some experimentation we selected as most convenient that in which the heels are situated at one-fourth the length of the plane from the posterior sharp edge.) A removable ledge (F) against which the heels are placed is provided here.

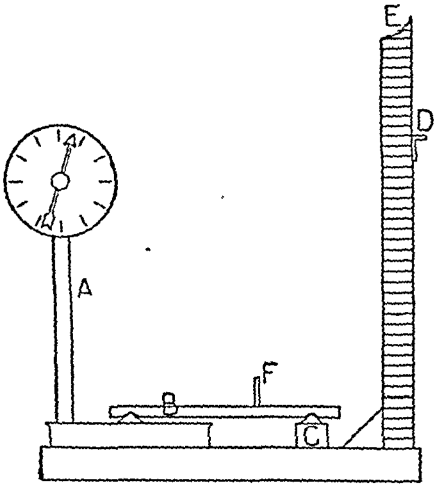

Fig. 1.—Diagram of the apparatus for estimating the center of gravity: A, scale. B, balance plane on which patient stands facing A. C, block supporting triangular edge. D, movable horizontal arm on upright for obtaining horizontal distances. E, vertical upright for standard plane. F, ledge against which heels are placed. (American Journal of Physiology.)

Since the balance plane on which the subject stands acts as a lever, in which the weight is borne between the fulcrum (the posterior sharp edge) and the supporting force (the spring which governs the scales), it is evident that the weight recorded on the dial (the balanced weight) will bear to the total weight the same proportion as that which obtains between the total length of the balance plane and the distance between the perpendicular dropped from the patient's center of gravity and the posterior end of the plane. That is: As the total weight is to the balanced weight, so is the total length of the board to the horizontal distance of the center of gravity of the patient from the posterior sharp edge (the fulcrum), or, to illustrate by a specific instance: The subject's total weight is 140 pounds; when placed on the balance plane his weight is 50 pounds, and the total length of the board is 20 inches.

The formula reads then:

$$\frac{140}{50} = \frac{20}{x}$$

This is then worked out as follows:

140)1000(7.1
980

200

The center of gravity of the subject then lies perpendicularly above a point 7.1 inches forward from the posterior sharp edge.

After the determination of the position of the center of gravity, which should occupy on an average one or two minutes, the position of the following points which have been marked on the skin are measured and recorded.

1. The position of the back edge of the malleolus.[3]
2. The position of the back of the head of the fibula.
3. The position of the middle of the trochanter.
4. The position of the posterior part of the spine of the fifth lumbar vertebra.
5. The position of the posterior part of the spine of the seventh cervical vertebra.

All these points are taken under the usual conventions of somatologic measurements on the living.

The measurements having been recorded, are then easily translated into graphic form by the reproduction of the observed measurements on a sheet of paper, of which the bottom represents the balance plane, and the edge of the paper the posterior plane of measurement.

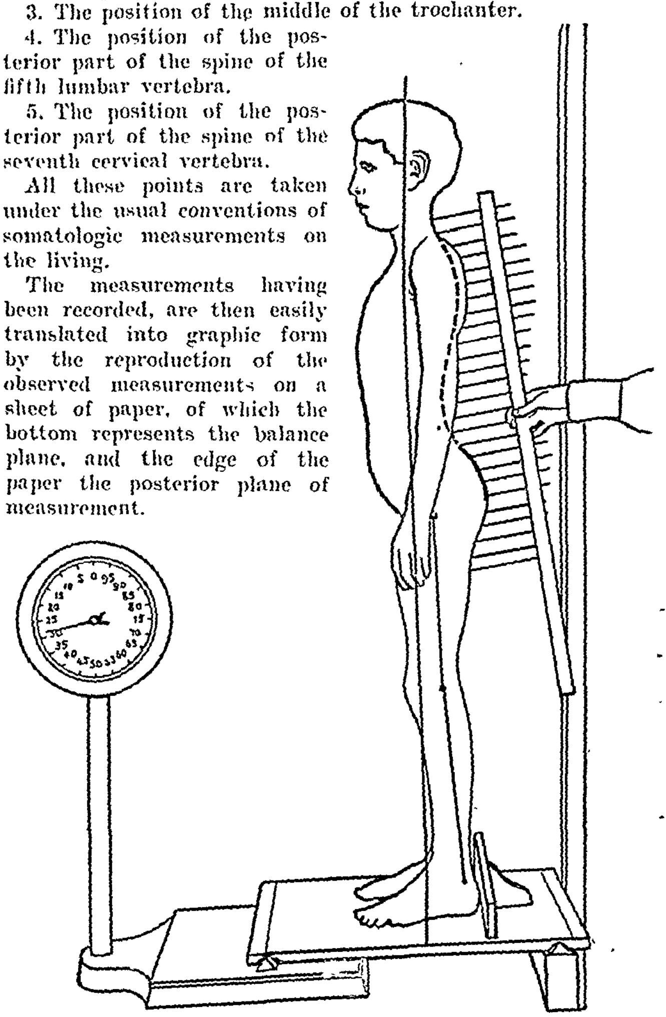

Fig. 2.—Apparatus in use. The lines drawn represent the lines shown in the record tracings. The long line running vertically is the perpendicular of the center of gravity.

These five comprise all the exact measurements which we have taken, but since the value of their graphic representation is considerably enhanced by its combination with some sort of representation of the body profile of the individual, we have completed the examination by the use of a device which obtains this with fair accuracy and which is illustrated in Fig. 2.

A series of horizontal metal arms, tipped with celluloid, slide easily through holes in the vertical wooden arm. These metal arms are shaken out to their full length, and their ends pushed rapidly and lightly against the subject's back in the median line, the point of the uppermost horizontal arm being applied to the seventh cervical vertebra. In the construction of the graphic record (Fig. 4), the position of this profile is known by its relation to the seventh cervical and fifth lumbar vertebræ; that is, these points are marked on the paper from the measurements taken, and the end of the uppermost arm of the profile instrument is laid against the mark which represents the seventh cervical, while a lower point is in contact with the mark representing the fifth lumbar vertebra. The curve is then traced on the paper containing the other measurements from the ends of the pins throughout its length.

The body curve of the ventral surface is obtained in the same way. The uppermost arm of the profile instrument is applied to the anterior surface of the neck at the level of the seventh cervical vertebra. The position of this curve on the chart is ascertained by using as points of reference the horizontal distances between the posterior parts of the seventh cervical and fifth lumbar vertebræ and the points horizontally opposite on the ventral surface, measured on the subject by a pelvimeter or other calipers.

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[3] In this and the following determinations the horizontal difference is obtained by a footrule, one end of which is placed against the marked point, while the body of the rule is held by the thumb against the upper surface of the sliding arm. Since this surface (and therefore necessarily the rule) is horizontal, the height of the point observed may be read at the same time, from a graduated scale which is marked on the upright post.

It would be very desirable that this graphic record should be completed in every instance by a representation of the inclination of the brim of the pelvis, which would, of course, include its relation to the trochanter, but after much experimentation we have been unable to measure with accuracy the inclination of the pelvic brim in the living subject.

The use of the profile curves in the graphic representation involves the disadvantage that the chart must be drawn life-size, but it can be reduced later by a pantograph to any desired size. The change effected in an individual by treatment or apparatus may be most convincingly displayed by the repro- of its record on the same chart, as in the figures shown e clinical section later.

The sources of error incident to the method have been carefully studied. They are swaying of the subject, errors in measurement from the vertical plane, distortion of attitude during observation, inaccuracy in locating on the skin the bony landmarks selected, varying position of the feet, horizontal rotation of the pelvis and psychical influences. These errors and their prevention are dealt with at some length in the original description of the method, and therefore need not be repeated here.

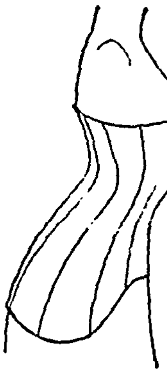


Fig. 3.—Outline drawing of bad corset applied to a model.

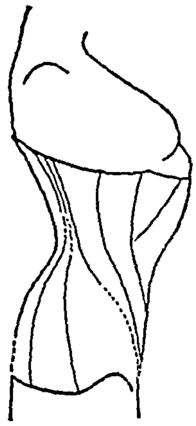


Fig. 6.—Outline drawing of good corset applied to a model

OTHER METHODS OF STUDY USED

At the beginning of our study we experimented with various methods which proved to be worthless for exact use. These were shadowgraphs, observations with plumb lines, study of the model standing on a glass plate by means of a reflected image in a mirror placed underneath and measurements from an upright without knowing the center of gravity. Photographs were largely used, at first without success, but later, by making two exposures on the same plate with the greatest care to prevent jar of the camera, two positions of the model could be recorded with accuracy, but any such composite photograph which showed any duplication of outline of the feet was rejected. Such photographs were mainly used in checking the accuracy of our results from our final apparatus.

Out of several hundred observations made mainly by the apparatus described, we finally selected two hundred as reliable for study, which form the basis of our present communication.

MATERIAL STUDIED

The study was made for the most part on female nude professional artists' models courteously sent to us by the School of the Boston Museum of Fine Arts. In the three and a half years some six of these were under observation, our study of one model at first lasting for months, while, toward the end, two or three were under observation during a fortnight. We selected female rather than male models because they were more easily obtained and more reliable, also because the condition under study occurs much more frequently in women.

Professional models, although clearly the only available material for our purpose, present certain disadvantages which we recognized. They are necessarily of stable types of figures, as otherwise the long-continued assumption of one position necessitated by their occupation would be intolerable, whereas we should have preferred to study women of the unstable types of figure. Another obstacle lay in their desire to help us, and we had carefully to conceal from them the purpose of our inquiry. Another difficulty lay in their ability and readiness to assume fixed unnatural positions, which in posing for artists they are, of course, compelled to do. We therefore supplemented the observations on these by such observations on patients as could be made without undue exposure, and a few such on normal persons, which have also been utilized in formulating our conclusions. These observations were then studied in detail, carefully correlated and analyzed.

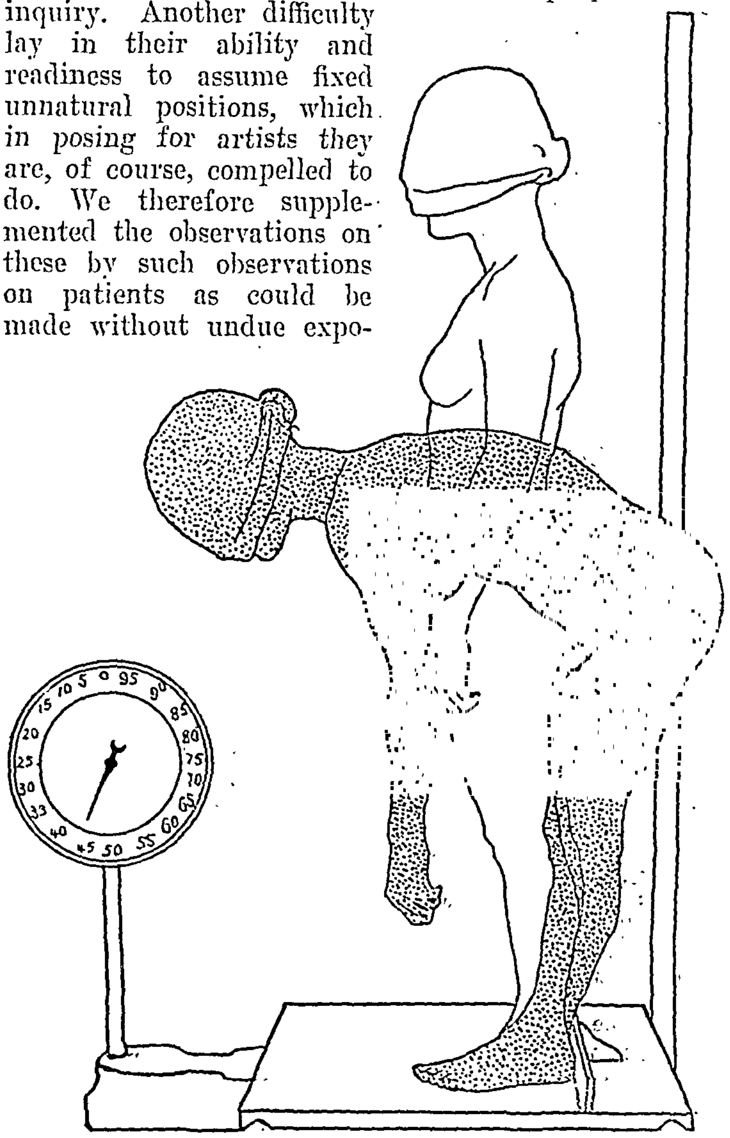
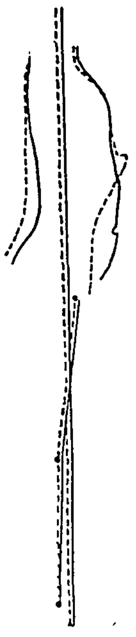


Fig. 8.—Drawing from composite photograph of model in two positions. The center of gravity is not changed in its relation to the feet.

DEFINITION OF FIELD OF EXPERIMENTAL STUDY

A consideration of the results of our physiologic study led us to the conclusion that antero-posterior balance in the upright position is maintained by moderate tonicity of the posterior musculature exerted against a slightly anterior position of the center of gravity. Reasoning from this led us to further experiments and observations, to be presently detailed, which seem to us to show that an important element in all static backache is to be found in back-strain, and that to assume relaxation of the sacro-iliac joints to account for the symptoms found is neither necessary nor wholly satisfactory. As soon, however, as we began to plan a series of observations relating to the question of balance, it became evident that the field was so large that we could hope to cover for the present only some one small phase of the subject, and after a survey of the whole field of inquiry opened by our physiologic research we decided to limit ourselves for this first paper to a study of the very suggestive question of why such backache was in our clinical experience frequently improved or relieved by the use of corsets or high-heeled shoes.

No one realizes more fully than ourselves how very small a portion of the whole field we have here covered, and our present contribution is regarded by us rather as a report of progress, possibly of therapeutic value, than as a final settlement of even the management of static backache. It is our intention to pursue the lines of investigation already undertaken further as opportunity may permit.[4]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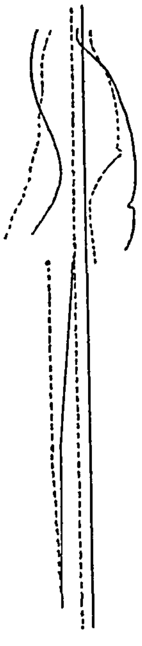
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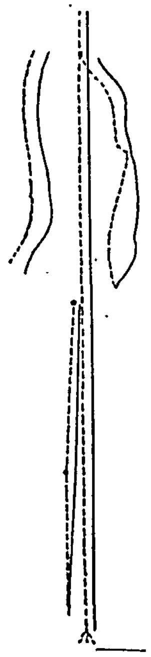
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Fig. 4.—Position induced by bad corset in dotted outline; normal in solid line. In this instance the shoulders are thrown back of the normal a little, but not so much as the hips. On this and all following records, the solid vertical indicates the original position of the centre of gravity, the dotted vertical the induced position.

Fig. 5.—Position induced by bad corset in dotted outline; normal in solid line. In this instance the shoulders are thrown forward of the normal and the hips back.

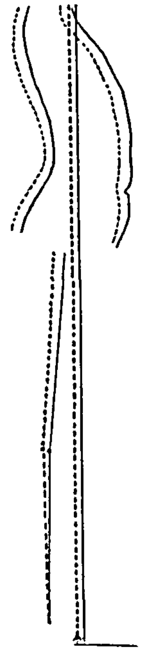
Fig. 7.—Position induced by good corsets in dotted outline. Normal in solid line. The apparent flattening of the lumbar curve in the dotted line is due to the bulging of the soft tissues through the open space at the back of the corset.

PRELIMINARY CONSIDERATION OF PHYSICS RELATING TO BALANCE

For the proper comprehension of the practical application of our experimental work to clinical conditions, it is necessary at this place to introduce certain elementary points in mechanics which are familiar to every one, for the preliminary problem under consideration resolves itself into an analysis of the mechanism of the standing position.

These points are the following:

1. The base of support of the upright human figure consists of a trapezoid formed by the outer borders of the feet and lines connecting the back of the heels and the front of the toes.
2. The center of support lies perpendicularly under the center of gravity and must always lie within this trapezoid.
3. For the purpose of studying the mechanism by which any weight is borne by a solid body in unstable equilibrium, the entire weight may be regarded as concentrated in the center of gravity, and the determination of the relation between the center of gravity and the bearing points determines the lines of stress.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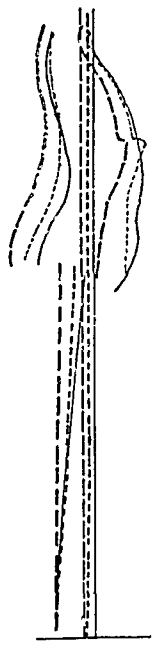
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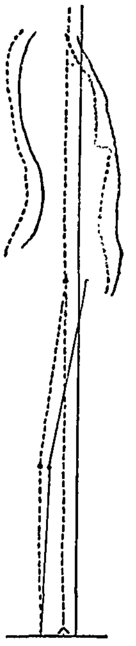
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Fig. 9.—Record of the normal position and that induced by high-heeled shoes, the normal in solid line, the induced position in dotted line.

Fig. 10.—Record of normal position in solid line, corset position in dotted line and position of shoes and corsets in black line broken at longer intervals.

Fig. 11.—Record of Patient 4, whose backache was relieved by corset and Cook back splint. Original position in solid line; position of relief in dotted line.

Our observations show that in the erect position the center of gravity of the body lies in front of the ankle-joints, which are held from dorsal flexion in this position by the gastrocnemius muscles. The center of gravity lies also in front of the knees, which are similarly held in position by the hamstring and quadriceps extensor muscles. The center of gravity lies also anterior to the sacro-iliac joints and most of the vertebral joints. The position of the acetabula cannot be determined in the erect position in the living individual because we have no means of locating them from any available landmarks. If we were able to determine the position of the acetabula in the antero-posterior plane it would be possible to state definitely, from the relation of the center of gravity to them, whether the trunk in the erect position would tend to fall forward or backward at their level. But from the impossibility of obtaining definite data on this point: we are obliged to resort to another line of observations to determine this matter.

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[4] 4. Other lines of investigation at once suggest themselves as likely to prove of value, especially from the point of view of the orthopedic surgeon. (a) The establishment of a "normal" for the standing position and the formulation of the normal position of the center of gravity is possible with a sufficient number of observations. (b) The relation of the line of weight to the foot may be of much importance. It is obvious that the further forward this line falls the greater will be the strain on the tissues supporting the arch. It may in the future aid in the diagnosis and treatment of static disorders of the feet. (c) The attitude of round shoulders is a vicious position of the entire body and not of the shoulders alone, and its treatment by gymnastics would be made more exact and efficient if the attitude were analyzed. (d) Some incidental experiments showed that the effect of corrective gymnastics must be studied by some more exact apparatus than the eye if they are to be correctly and efficiently prescribed. (e) The static conditions evidently underlying the ptoses of the various abdominal viscera form a most promising field of study.

It has been shown by many experiments that when the cadaver is stood erect and the legs and ankles are fixed (to prevent the cadaver from collapsing on the ground), the trunk falls forward from the hips. In the erect position then the trunk is held extended on the legs by the combined and continued action of the posterior musculature; the chief factors here being the hamstrings, the glutei and the erector spinæ muscles.

If, however, for any reason the center of gravity becomes displaced forward, the strain on the posterior musculature necessarily becomes increased throughout, because the vertical stress at each level is determined by he horizontal distance of that point from a perpendicular dropped from the center of gravity, and, if this moves forward, the strain increases in proportion to the increased horizontal distances. So, too, other things being equal, the points farthest away from this perpendicular suffer the greatest stress.

Having presented these preliminary considerations in mechanics, we come next to the report of our experimental observations on the disturbances of balance.

THE EFFECTS OF CORSETS ON BALANCE

Throughout our remarks on this subject, we desire that it should be remembered that our experimental studies were concerned only with balance and the modifications produced on balance by corsets and high-heeled shoes, and that the other effects of these are not discussed.

In our experimental work it early became apparent that the assumption of any enforced position for even the short time involved in an observation left behind it an alteration of the normal, or unrestrained position which persisted for a number of minutes; also that mere maintenance of the standing position resulted in the appearance, after a surprisingly short but variable time, f a modification of the normal which we designated as "fatigue position."

For these reasons it was necessary in our corset work to take a fresh observation of the normal attitude before each corset observation, to insist that each corset observation should be followed by at least fifteen minutes' complete muscular relaxation in a recumbent posture, and to limit the number of corset observations in any one sitting to two at most.

In their effects on the antero-posterior position of the body, corsets may be divided into three classes and each class must be studied separately if clear results are to be obtained. After much unsuccessful search for a satisfactory nomenclature for these three classes we have adopted the brief and comprehensible, though somewhat unscientific terms: the neutral, the bad, and the good corset.

A. Neutral Corsets

The indifferent or neutral class includes the great majority of all corsets worn by women, but it must be remembered of this statement that it applies only to the effects of corsets on balance, posture and static backache. Many of the posturally indifferent corsets may be harmful in other ways. Few of them are beneficial. At the present time practically all ready-made corsets belong to the posturally indifferent class. Indeed, we found it necessary to have good and bad corsets specially made for each of the models with whom we experimented. Until we did this, our results were confusing, but after this precaution was taken the results of observations on all forms of corset became uniform, consistent, and sufficiently evident to permit of clear record and definite deductions. Neutral corsets produced no appreciable effect on body balance.

B. Bad Corsets

We use the term "bad corset" to designate that whole class of corsets the use of which we have learned to associate clinically, and to some extent experimentally, with the existence and production of static backache. All corsets of this class have definite common characteristics. All produce the same effect on posture when submitted to exact observation, varying only in the degree of their results. All tend to increase or produce static backache if persistently worn.

The common characteristics of this class of (bad) corsets are as follows: 1. They are long behind (especially at the top) and short in front (especially at the bottom). 2. They are cut to exert their greatest pressure at the waist and at the top and bottom are capable of exerting pressure only against the wearer's back. 3. They have strongly marked sacral curves, but are otherwise straight in the back, and are highly incurved at the waist in front.

Figure 3 is an outline of a representative specimen of the bad corset made from life by a very competent artist. The bad corsets uniformly moved the center of gravity back and effected an important alteration of posture. To the unaided eye this usually appeared as a simple movement of the shoulders forward, but this effect, though very constant, was in fact an illusion. When their action was measured and recorded it proved that they really threw the shoulders slightly backward, but always much less than the hips, which were thrown far behind the normal, thus inclining the line of the back forward and giving the illusion of forward shoulders.[5]

Figure 4 and Figure 5 show the effect of the bad corset.[6]

C. Good Corsets

The forms which we class together as the good corset have equally definite common characteristics and effects on posture. They are all in greater or less degree beneficial to those who suffer from static backache.

The common characteristics of all the forms which we class as good corsets are (1) that they are short behind (especially at the top) and relatively long in front (especially at the bottom); (2) they fit the wearer tightly around the pelvis (especially in the space between the iliac crests and the trochanters) and decrease regularly in pressure to their upper edge where they are very loose (especially behind); (3) they are considerably incurved at the waist line at the back and sides, but show no waist curve in front. Figure 6 is a life sketch of such a corset. The good corsets invariably moved the center of gravity back, and in all our experiments they threw the shoulders back of the normal, but under their effect the hips never moved further backward than did the shoulders and sometimes less. Figure 7 shows the actual effects of the good corsets as recorded.

It will be seen that, though both the bad and good forms of corset move the center of gravity backward in its relation to the base of support (the feet), they affect its relation to the more important bearing points of the body in directly opposite ways, a fact which explains their bad and good effects on back-strain and static backache.

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[5] In a few instances, the shoulders were unmoved or thrown very slightly forward, but always with strong backward displacement of the hips.

[6] The bad effect of a corset is not necessarily dependent on stiffness and we have seen the posture described as characteristic of bad corsets induced by badly cut "hygienic" waists.

In connection with the effect of the bad corset Figure 8 possesses illustrative interest. This is an accurate outline reproduction of a composite photograph. The model was first told to stand at ease on the balance plane, then to bend forward, and exposures were made of each position on the same plate. The dial of the scale was included in the plate and was found to rest at the same point in both attitudes. The model (who was entirely ignorant of the purpose of the experiment) had instinctively preserved her normal balance, and the relation of the center of gravity to the base of support was unaltered, but its relation to back-strain is seen at a glance to have been utterly different. The stippled position in Figure 8 is, in fact, only an exaggeration of the position induced by bad corsets (compare Fig. 5) as contrasted with the normal, the inclined position of the back subjecting the posterior musculature to increased strain in the dorsal and gluteal regions. No one will doubt that the erect position is one of comparative ease to the posterior musculature, nor that the forward bent position would produce backache if long persisted in.

SELECTION AND MANUFACTURE OF PROPER THERAPEUTIC CORSETS

The recommendation of any specific make of corsets is impossible, even if for no other reason, because there is no make of corsets appropriate to all figures; and there is no make of corsets which remains stable under the changing fashions. There have been times in the past when most of the ready-made corsets belonged distinctly to the bad type. There have been periods in the past when the ready-made corset frequently tended toward the good effect. At the present time, as has been said, most ready-made corsets are inefficient or neutral. A ready-made corset of more or less neutral type can often be so altered by taking up its seams that it produces a fairly good effect, and this can be increased when necessary by the use of a Cook's back splint,[7] but the manufacture of a good corset by a skilful corsetière to fit the individual wearer is preferable when practicable.

In the production of the desired effect which should be produced by a "good" corset three points are important: 1. It is essential that the more important seams run diagonally forward and downward in order to secure the proper lines of strain in the cloth. 2. The bones which serve to keep the corset from wrinkling should run in such directions as not to interfere with these strains. 3. The patient should be taught to apply it properly after it has been properly made. These points seem to us so important that they are presented somewhat in detail.

1. In having corsets made for patients the easiest method of obtaining therapeutic results is to have the corset brought to the office after it has been cut and stitched together, but before it has been boned. It should then be somewhat large for the patient, and, after being placed on her, should be made to fit her by pinching up the seams one by one and securing them with pins. In Figure 6 the seams which are especially likely to need tightening in this way are marked with a broken line. The corset when completed should fit very tightly in the space between the trochanters and the iliac crests. This anchors the corset and in many figures prevents its riding up without the use of the objectionable front garter. It should merely fit the patient over the iliac crests and immediately above them, as tightness at this point is uncomfortable and makes the corset ride up. In the back it should fit the hollow of the waist snugly, being hollowed in at the back, but not at the front, and above the waist it should be left as loose as the patient will wear it. In the front it should be straight, without constriction at the waist.

2. The anterior bones should run from above downward and strongly forward.

3. To be properly applied a corset must be laced in three sections, sacral, lumbar, and dorsal. Before it is put on, all the lacings must be widely loosened. The corset must then be settled into place as low as it can be worn, and clasped. The patient should then pass the hand inside it and lift the abdomen into it, settling the front of the corset as low as possible. The lumbar lacing should be pulled comfortably snug. The sacral lacing should then be made as tight as can be borne, and if the corset is so made as to spare the iliac crests, and properly cut out for the thighs in front, very tight lacing around the solid pelvis is comfortable to the patient. The dorsal lacing should be left as loose as is comfortable.

The clinical tests of the completed corset are that it should be comfortable to the wearer and that it should produce to the eye of the observer the effect illustrated in Figure 6.

THE EFFECT ON BALANCE OF HIGH-HEELED SHOES

The question of body balance as affected by shoes of different kinds has been ably discussed by Cook of Hartford, and our results by measurement correspond closely to those reached clinically by him.[8]

In speaking of high-heeled shoes, it should again be particularly noted that we are speaking only of the effect of such shoes on balance and not of their effect on the foot. Our observations dealt with the effect on balance of shoes with heels varying from 1½ to 2¼ inches in height.

Preliminary experiments with composite photographs and the balance apparatus led us to the belief that raising the heel of the unshod foot by means of a book placed underneath tipped the body forward, and that compressing the front of the bare foot by a bandage without raising the heel tipped the body balance back, and we inferred that the effect of the high-heeled shoe was merely the resultant of these two opposed elements. But with the perfection of our apparatus we found that neither of these two component effects was constant, whereas the effect of the high-heeled shoe was constant. After a long series of experiments it became evident that high-heeled shoes tip the body back as a whole without making any appreciable change in the lumbar curve. Figure 9 is an instance of these records. There was but one exception to this effect in our observations on high-heeled shoes. This was in a rather degenerate type of girl whose center of gravity was naturally abnormally far back, and it is probable that her inability to tip further back without falling, forced her to compensate by forward muscular effort against the shoes. This was, at all events, the only exception among many observations.

One possible source of experimental error must be mentioned, for the sake of possible future observers, in connection with this conclusion that the body is tipped back by high-heeled shoes. In overlaying the tracings for comparison the malleoli must correspond rather than the toes or heels. Without this precaution the mechanical distortion due to the oblique position of the foot in high-heeled shoes would lead to evident error.

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[7] A leather support reinforced by light steels bent to fit the back and support the lumbar curve where the corset lacings fail to give the support afforded by the rest of the corset.

[8] Cook, Ansel G.: The Question of Balance, Am. Jour. Orthop. Surg., July, 1907, and May, 1909.

THE EFFECT ON BALANCE OF HIGH-HEELED SHOES AND CORSETS COMBINED

Our observations on the combined effect of high-heeled shoes and corsets opened up a very complicated question that we have not yet been able to solve satisfactorily, although it is a more important question clinically than the others, because the combination of high-heeled shoes and corsets is what one meets clinically. In all of our experiments, moreover, we found that models in corsets, and most markedly in bad corsets, were much more comfortable standing in high-heeled shoes than without them—a fact confirmed by clinical experience. In our work on this point each observation was taken of the model without shoes or corsets, then with corsets of one of the various types, and then with both the corsets and shoes. The *three tracings were then overlaid for* study. The mechanical complications involved were so many that at present we are not prepared to make a more definite statement than that the use of high-heeled shoes seems to modify, toward the individual's normal, the position induced by corsets and particularly the position induced by bad corsets, already described. Figure 10 shows a record of this combination.

Finally, in this connection, we would protest against the indiscriminate advice so generally given to patients with backache to avoid high-heeled shoes. In many instances coming under our observation, such a change has been followed by most uncomfortable results.

DEDUCTIONS FROM OBSERVATIONS

Our conclusions from the experimental part of our paper are: that the center of gravity can be determined in the living erect individual; that this center of gravity is so located in relation to the supporting structures that the erect position is maintained by the tonicity of the posterior musculature; that forward displacement of the center of gravity leads to increased demand on the posterior musculature to maintain the erect position.

In the position induced by what we have designated as the good corset, the strain on the posterior musculature is lessened by displacing the center of gravity backward, and more especially by the fact that the shoulders are moved back at least as far as are the hips.

Though the bad corset also displaces the center of gravity backward, the relief to the posterior musculature which would be expected from this is neutralized in the position which they induce, by the fact that the pelvis is moved much further backward than the shoulders, thus inducing an inclined position of the back in which the weight of the trunk, considered by itself, is thrown so far forward as to place undue strain on the posterior musculature of the lumbar and pelvic regions.

In the position induced by the wearing of high-heeled shoes, without any other modifying apparatus, the strain on the posterior musculature is relieved by motion of the center of gravity backward, through movement of the body backward as a whole, *chiefly from the ankle*-joint.

The study of two forms of modifying apparatus applied to the subject at the same time introduces so much complication of conditions that conclusions therefrom must be drawn up with great caution. When high-heeled shoes are observed in conjunction with either form of corset we conclude that the attitude characteristic of either form of corset is modified slightly toward the normal of the individual by the addition of high-heeled shoes, but the analysis of the effect so produced involves so complicated a mechanical study that we are not yet prepared to publish conclusions as to why this effect is produced.

II. CLINICAL SECTION

The clinical section of our paper is best introduced by the presentation of a few personal illustrative cases selected from many similar ones and reported in abstract for economy of space.

ILLUSTRATIVE CASES

Case 1.—Patient, single, 53 years old, was sent to E. R. by a prominent orthopedic surgeon for backache and sense of weight in the abdomen which in spite of evident static faults had been uncorrected by his treatment, and which he was acute enough to believe must be traceable to some pelvic condition. On examination it was evident that her forward posture was due to an unconscious attempt to lessen pressure on a fibroid which *nearly filled the true pelvis, and that the orthopedic* apparatus had been ineffective in correcting the attitude or in relieving symptoms because it had been applied in the face of the determining cause, the fibroid. The patient made a prompt convalescence from a hysterectomy, but on rising from bed was extremely discouraged to find that the backache, which had led her to seek treatment, was, if anything, worse than before; but when she returned to the orthopedic surgeon who had originally treated her he found that the same apparatus which had before been ineffective now gave prompt relief, and after a few months she was able to drop it gradually. When last heard from, some time afterward, she was entirely well without treatment.

In this case orthopedic treatment was unsuccessful till the primary cause was removed. Hysterectomy alone might ultimately have relieved the backache without orthopedic treatment. Backache was, however, immediately and permanently cured by orthopedic treatment following the operation.

Case 2.—Patient of E. R., married, aged 35, had undergone three major operations and prolonged local treatment without relief at the hands of three very prominent gynecologists, the chief symptoms being renal pain and sacral backache. The operations were nephrorrhaphy, anatomic success, with therapeutic failure, and two suspensions, both of them anatomic and therapeutic failures. Prolonged trials of pessaries had been made by two of the gynecologists, always ineffective, and always increasing pain and backache. Evident static faults, too complicated for the gynecologist to treat, were present and the patient was referred to the orthopedic surgeon of her choice after she had positively declined to allow replacement of the uterus and the insertion of a pessary on the ground of her previous experience. After considerable orthopedic treatment she was relieved of all her symptoms except sacral backache, which continued distressing. She then allowed E. R. to insert a pessary, which for the first time in her history she wore not only without pain but with immediate relief of the backache, and after wearing it for several months became able to maintain a forward position of the uterus without the pessary. She is still under orthopedic treatment but is relieved of her symptoms. Orthopedic treatment should have preceded an operation.

The names of the other medical men connected with these cases are omitted for obvious reasons.

Case 3.—Patient, sent to E. R. by Dr. Chandler of Medford in January, 1908, 40 years old, married; no children; dysmenorrhea always; dyspareunia always; indigestion with intestinal gas three years; frequent frontal headache; occasional not very severe neuralgia in left sacrosciatic region, along the distribution of the left sciatic nerve and over the inner surface of the left thigh, always increased by walking and standing, but almost constant before and during catamenia. Pains and aches in all portions of the body. Patient did not seem in very bad condition, but was very self-centered, running from one specialist to another. On examination pelvic organs were normal. Diagnosis, orthopedic disability. Patient was told that she should consult an orthopedic surgeon but that her many specialists should be under the control of a neurologist whom she should see frequently and persistently; referred to Dr. J. J. Putnam with consent of Dr. Chandler with written opinion to this effect; referred by Dr. Putnam to R. W. L.

Examination by R. W. L. showed that the patient stood with a slight left lateral curve and in a general "slumped" attitude. The lumbar region was flat, the dorsal region rounded and the knees were inclined to be held slightly flexed. She complained that she felt as if her back were not hollow enough; and to get relief she assumed a position with more lumbar curve in which the knees straightened. She showed marked tenderness over the left sacroiliac joint and felt some pain in the left leg. A radiograph showed that the sacroiliac joints were normal.

She was provided with properly fitted therapeutic corsets giving marked support in the lumbar region and which were tight around the pelvis, and was started on exercises. She was not markedly improved by this treatment at the end of a month.

Orthopedic treatment having failed to afford relief, Dr. Putnam put the patient under general rest-cure methods in a hospital. His observation there convincing him that the left-sided pain was genuine and persistent, and its catamenial exacerbation pronounced, he requested another examination from E. R. Examination without anesthesia was again negative, but under anesthesia the presence of a slightly enlarged, hard, non-tender left Fallopian tube was demonstrated, and a few days later the abdomen was opened. The left tube proved to be straight and patent, but with much thickened and indurated walls; the corresponding ovary slightly enlarged, sclerotic, and containing a very large number of small tense cysts scattered through it like a charge of birdshot. The left ovary and tube were removed, and abdomen closed. Normal convalescence. Patient declared that all abnormal sensations in left side had disappeared. On getting up there was, however, some left-sided sacroiliac backache, relieved by a therapeutic corset. Patient returned to Dr. Putnam's care. When last heard from, one year after operation, she considered herself well.

In this case the essential factor was at first missed and the case considered orthopedic. After longer observation the detection and cure of the abdominal lesion resulted in spontaneous relief of the apparently static symptoms.

Case 4.—Patient of R. W. L., a healthy and well-developed young woman, a professional teacher of gymnastics, at the end of a very hard year developed severe sacral backache for which advice was sought. She was at the time wearing a small girdle. She was treated by corsets and one of Cook's back splints. The pain disappeared immediately and an observation was made showing that the center of gravity had been moved back 1½ inches. This change was so great that a second observation was taken a week later for purposes of verification with identical results (Fig. 11).

The relief was permanent and the case was evidently one of pure back-strain induced by overexertion and therefore relieved by the change of balance and consequent relief to the posterior musculature without further treatment.

Case 5.—Patient of R. W. L., a married woman, 34 years old, of rather less than average physique, had been fairly well until her confinement a year and a half previous. Shortly after getting about she began to have pain in the back and in one leg, and standing was accompanied by great discomfort. She had lost flesh and was very nervous and apprehensive. Examination indicated that the backache was apparently static. She had been treated by osteopathy without success, and later the diagnosis of a relaxed sacroiliac joint had been made. For this a plaster-of-Paris jacket had been applied and worn without any relief of the pain. When she was seen she wore a steel back-brace and a neutral corset. An attempt was made to throw the center of gravity backward by means of a properly made corset reinforced by a light tempered steel back brace to throw her balance back; this gave immediate comfort, and gentle exercises were begun. In three weeks she was practically free from pain, had gained in flesh and was improving as to her nervous instability.

In this case of evident back-strain the use of the ordinary appliances to splint the back did not give relief, which was obtained by changing the body balance by corsets.

APPLICATION OF EXPERIMENTAL DEDUCTIONS TO CLINICAL CONDITIONS

It becomes evident from the most casual consideration that in this class of cases there exist two elements, the gynecologic and the orthopedic, and an analysis of the probable primary cause of the pain, therefore, becomes necessary.

That forward displacement of the center of gravity induces increased effort of the posterior musculature (back-strain) has been demonstrated in our experimental section. That such excessive or prolonged muscular effort may be translated into pain, spasm and irritability is not only more or less a matter of common information, but may be supported by quotation of certain well-known analogous instances. If the arm is held out horizontally, after two or three minutes the muscular effort is translated into an ache. The spasm and irritability of the ciliary muscle which is overstrained to accommodate for astigmatism is well known. The pain and dragging in pronated and flat feet is generally admitted to be due to muscular and ligamentous strain.

That back-strain sufficiently long continued, induced by an unduly forward position of the center of gravity may be translated into backache seems evident. The unduly forward position of the center of gravity which induces backache we believe to be usually caused by one of three factors:

1. Peculiarities in the form and proportions of the skeleton (not necessarily outside of normal limits) resulting in a type of figure with a center of gravity markedly far forward.
2. General muscular relaxation leading to a "slumped," relaxed attitude.
3. Tenderness of intra-abdominal or intrapelvic organs inducing the patient to assume a stooping or other strained position to relieve intra-abdominal or intrapelvic pressure.

The gynecologic cases described above belong in the latter class and, though it is evident that the field of intra-abdominal or other visceral lesions which may cause such attitudes is wider than that covered by any merely gynecologic cases, yet they are presented as the most frequent representatives of a large class for the purposes of this paper.

It is further evident from the anatomy that in the case of the comparatively unprotected sacro-iliac joints even the painful spasms of the dorsal musculature may, and probably do, fail to prevent painful tension on the connective tissue (ligaments and fasciæ) placed there to regulate extremes of motion. Without denying the occasional existence of abnormally movable sacro-iliac articulations (mostly puerperal) we believe that undue tension on connective tissue from overstrain is sufficient to explain the symptomatology of most cases of apparent functional derangement of the sacro-iliac joints without invoking the possible existence of an abnormal mobility to explain it further.[9]

DIFFERENTIATION OF CASES AND TREATMENT

Our observations would be of little value to ourselves or to others were we not prepared to formulate certain conclusions governing the treatment of these cases. It is evident that a determination whether the original cause of the backache is primarily intra-abdominal or originally static is a necessary preliminary to intelligent or effective treatment. In practice, in the comparatively limited field selected by us for discussion here, the cases would seem to fall schematically into three classes:

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[9] It has been a matter of common observation that pain in the back, of the character described, may be induced by lateral inequalities of the skeleton producing lateral strain, e. g., a short-leg; and during this series of observations we have been confronted by numerous instances of it. We feel sure that such lateral inequalities predispose to the unilateral (one-sided) localization of pain induced primarily by bilateral strain, but we have thought it necessary in this series of observations to limit ourselves to the one point of antero-posterior strain and have therefore recorded no observations on this issue.

1. The gynecologic, of intrapelvic origin.
2. The orthopedic, of mechanical or static origin.
3. The borderland cases in which both elements are present, or in which the differentiation between the two is at first impossible.

The recognition of a borderland class is necessary on account of the frequency of its appearance in clinical work, but the line between this and the other classes is so indefinite that it can be described only by implication under the other headings.

1. Treatment of Cases of Intrapelvic Origin

Static backache is frequently a prominent symptom of the intrapelvic neoplasms. It is then due to an alteration of attitude caused either by an instinctive effort to lessen pathologic pressure within the pelvis, or by disturbance of balance from the actual weight of the larger growths. In these cases no improvement in the static condition can be expected until after the removal of the neoplasm, and here an immediate operative removal should be promptly followed by proper orthopedic treatment if necessary.

On the other hand, many of the ptoses are merely secondary results of static abnormalities. In these cases especially, gynecologists should be careful not to adopt treatment without first making a study of the static causes which so often have produced, or are perpetuating them, since some previously unmanageable retroverted uteri, prolapsed ovaries, etc., can be promptly relieved by minor intrapelvic treatment after the static faults which caused them have been corrected. Ptoses of the kidneys and other upper abdominal viscera are equally important and should be considered. Under these conditions, also, those cases which still demand major measures will more surely become symptomatic as well as anatomic successes, and many anatomic failures will be avoided.

In the inflammatory affections of the pelvic organs the instinctive efforts of the patient to protect the tender structures from the pressures and jars which are always incident to locomotion in the erect posture, lead usually to so persistent a maintenance of a constrained attitude that the prominence of static backache in these cases is easily understood in the light of what has been said in our experimental section.

The relative value of static or intrapelvic treatment as an initial step in the management of these cases depends largely on the stage of acuteness at the time at which treatment is undertaken. It is generally conceded that during the presence of an acute symptomatology the inflammatory affections of the pelvic organs should have depletive and soothing rather than radical treatment. In the more acute cases the muscles of the back are almost invariably in a state of irritation and spasm, and no part of the initial palliatory treatment is more important or more promptly grateful to the patient than rest in bed, support to the irritated muscles, hot packs, the local electric light bath, etc., for their relief. On the other hand, even in the chronic cases, too early attempts at mechanical correction of the faulty posture are apt to do harm rather than good so long as the pelvic tendernesses are unrelieved, since if successful they again expose the tender organs to the pressures from which the faulty attitude has partially relieved them.

The complication of ptoses with inflammatory conditions demands evidently the weighing of relative indications in the individual case.

It is manifestly impossible to cover within the length of such a paper as this, even in outline, the whole field of gynecologic practice in its relation to static backache (even without the equally important lesions of general abdominal surgery), but we hope that what has been here said may serve to illustrate the principles involved.

The gynecologist may, of course, readily examine the backs of his patients and may with practice acquire some facility in the differential diagnosis of back-strains into those of primarily intra-abdominal or primarily static origin, but he should never forget that in the static cases the abnormality which is the original cause of the symptom may often be found in a distant part of the skeleton (e. g., the feet), and that its detection may require special knowledge.

Throughout the field of gynecologic practice the estimation of static conditions is of importance whenever backache is a symptom.

2. Treatment of Cases of Mechanical or Static Origin

The orthopedic surgeon will be wise to refer to the gynecologist for a preliminary examination and opinion by which to guide treatment, those cases in which the history, or the replies to the usual questions, are suggestive of uterine disease. This is especially important when the symptoms suggest the possible presence of inflammatory disease of the intrapelvic organs, since in these cases, as has been said above, alteration of attitude, such as would be indicated by the back-strain alone, may be distinctly harmful.

The accepted orthopedic treatment of back-strain as it exists to-day has been already spoken of in the beginning of the paper. It is a matter of common information that it is on the whole unsatisfactory. The treatment which from our point of view should be in theory the most satisfactory, and which in practice in our hands has proved the most successful, is as follows:

A defect of balance exists which in the end must be cured by remedying that defect of balance, a matter only to be brought about by substituting a correct for an incorrect attitude. Massage and gymnastic exercises to induce this correct attitude would seem to be the obvious method to follow. But practically this alone at the outset is generally unsatisfactory for the following reasons: One is dealing in most instances not with athletes with well-developed muscles, but with men, or more often women of less than average physique as a whole, whose back muscles in particular are overstrained, weak and irritated. These patients are recumbent not over ten out of the twenty-four hours as a rule, and for the rest of the time are generally sitting, standing, or walking. To begin by gymnastics on muscular development under these conditions is to exercise still further for perhaps half an hour daily, muscles already overused, and for the remaining fourteen hours of the twenty-four the irritation induced by the malposition goes on, for a correct position cannot at once be substituted for an incorrect position. It is a frequent experience to find the backache made immediately worse by such treatment, even when given by skilled persons. It is as if the oculist ordered his patients suffering from eye-strain due to astigmatism to use the eyes a little more each day to strengthen them before he corrected the visual error. The best results in back-strain are to be obtained, not by attempting to strengthen irritated muscles at the outset by further use, but by temporarily putting them at rest by relieving the strain of the posterior musculature.

A properly fitting corset with a tight pelvic hold not only improves balance, but incidentally serves as a splint and support. The blacksmith who is to do heavy work with his arm puts a leather strap around his wrist to enable his muscles to work to better advantage. He gains thereby an extra annular ligament.

Proper corsets, then, accomplish three things in the relief of this condition:

1. They tend to correct vicious balance by carrying the center of gravity backward, thus relieving muscular strain.
2. They partially splint the lower back.
3. They furnish an artificial annular ligament to the glutei muscles.

High-heeled shoes are also to be recommended temporarily, when comfortable to the patient, because experimental observation has shown that they carry back the center of gravity, and clinical experience is generally confirmatory of their good effect.

If lateral deviation of the spine exists, it is to be improved by an extra lift on the shoe of the side to which the body leans.

In the more severe cases the active day should be a short one and recumbency for some hours during the day should be insisted on. It is only necessary to allude to the fact that the general condition of the patient must, of course, be attended to from the outset. After a week or two of such treatment, aimed at resting tired and irritated muscles, the patient is generally ready for the second stage of the treatment, muscular development as a means to the attainment of a permanently correct attitude. In irritable cases the exercises should be given at first in the recumbent position and later only in the erect position. The whole tendency of most medical gymnasts is to overdo both the massage and exercise at first. It must be remembered that the maximum muscular stimulation from massage is reached at the end of five minutes[10] and that, after that, deterioration of muscular strength follows. Increase of backache following the exercises is a sign of too active exercises or too long a period of them. They are best taken once a day, the length of the period being gradually increased.

It must be admitted that, irrational as it is, many cases of backache are relieved by the use of corsets and high-heeled shoes alone. In a larger number this is a most useful preliminary to further attempts at radical cure, and we must remember that we shall be really curing such patients only when we have found and removed the condition which caused the disturbance of balance inducing the back-strain.

CONCLUSIONS

We believe that static backache is essentially a mechanical disorder; that is, that it is the result of a loss of balance producing local strain on the tissues in the lumbosacral region and elsewhere in the posterior musculature. We further believe, and regard it as our most essential point, that whatever the local mechanism which produces the symptoms may be, such backache is in a large proportion of all cases not a disease in itself (as suggested by such terms as "hysterical spine," "relaxation of the sacro-iliac joints," etc.), but is a mere symptom-complex due to an abnormal attitude induced by peculiarities of the skeleton, lack of proper muscular balance, or abnormal conditions in the abdomen or elsewhere. We believe that in diagnosis the local condition should be regarded as primary only after every cause elsewhere has been excluded.

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THE EFFECT OF ETHER ON CERTAIN PROCESSES OF IMMUNITY.[*]

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The following study was undertaken as a part of a more general problem on postoperative lung complications suggested to me by Dr. Arthur Dean Bevan. An attempt was made to investigate the effect of ether on the phenomena of bacteriolysis, agglutination and phagocytosis. The clinical cases studied have been chosen from the surgical services of the Presbyterian Hospital. Squibb's anesthetic ether was used.

Because of the ease with which marked fluctuations of the bactericidal and agglutinating powers of a serum may be determined with the use of the typhoid bacillus, the work to be described concerning the effect of ether on bacteriolysis and agglutination was carried out with this organism. In each case experiments were conducted *in vitro* by adding ether in varying amounts to both normal and immune typhoid serums and also *in vivo* by observing the effect of ether anesthesia on these properties of the serums of practically normal human individuals, normal rabbits, and rabbits which were immune to the typhoid bacillus. The experiments on bacteriolysis were conducted in the usual manner by counting the number of colonies on agar plates after incubating the mixtures of serum and bacteria for variable periods. Sterile corks were used in the tubes instead of cotton plugs in order to minimize the evaporation of the ether while in the incubator. Varying amounts of ether up to 1 per cent. were used in different experiments. In none of the work was there observed any appreciable effect of the drug on bacteriolysis. The observations of the effect of the drug on agglutination were made with both the macroscopic and microscopic methods. Here also no alteration of the phenomenon was produced when ether was present in any amount from 0.1 per cent. to 2 per cent., or after an ordinary ether anesthesia.

In the work on phagocytosis it was found that ether, when added to both normal human and rabbit serum *in vitro* in varying amounts of from 1 per cent. to 2.5 per cent., reduces markedly the phagocytosis of streptococci. Similarly a reduction of phagocytosis was observed to occur after an ordinary ether anesthesia both in the human and rabbit. This reduction *in vivo* was demonstrated with *Streptococcus, Pneumococcus, Staphylococcus aureus, B. coli* and *B. typhosus.* For the study of the effects of the anesthesia on human individuals, cases were taken which involved fairly simple operative procedures on comparatively healthy young adults. Precautions were used to rule out factors which might complicate the results, such as infection, hemorrhage, shock, etc. The experiments on normal rabbits were carried out by subjecting them only to an ether anesthesia without operative measures of any kind. In this work the usual opsonic technic was employed. The reduction of the phagocytic power of blood after an ordinary ether anesthesia continued in different experiments over periods of two days' to several weeks' duration. This depression apparently was due to a direct effect of the ether on both leucocytes and serum, not to any effect on the bacteria themselves. The effect on the leucocytes was determined (1) by noting a greater decrease in phagocytosis when the patient's leucocytes were used in the experiments than when normal leucocytes were mployed, and (2) by observing on a warm stage a minished amount of ameboid motion and less phagocytosis of carmine particles by leucocytes subjected to the action of ether. The direct effect on serum was made evident by experiments to determine the comparative opsonic sensitizing power of normal serum and of a mixture of normal serum and ether. Streptococci were added to both the normal serum and the mixture containing ether, and after thirty minutes' incubation the bacteria were washed free from the serum by centrifuging in three changes of 0.85 sodium chlorid solution. They were then added to normal leucocytes. Much greater phagocytosis occurred when normal serum had been used for sensitizing than when the serum and ether mixture had been employed.

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[10] McKenzie: Exercise in Education and Medicine, Philadelphia, 1909, p. 47.

[*] This work was carried out in the Surgical Service of the Presbyterian Hospital and in the Memorial Institute for Infectious Diseases. A report of the work was given before the Section on Pathology and Physiology of the American Medical Association, at Atlantic City, June, 1909.

In seeking for an explanation of these phenomena the interesting hypotheses of Meyer[1] and Overton,[2] that the anesthetic action of the fat-solvent drugs depends on their "mechanical affinity" for the fat-like substances of the body, seemed to afford a possible means of making clearer the mechanism by which ether reduces the phagocytic power of blood. Particularly did this theory seem to furnish at least a working hypothesis in the light of esults, very similar to those described here, which have een obtained by other workers with the use of alcohol and chloroform, drugs which have a pharmacologic action very similar to that of ether and are also fat-solvents.

Of particular interest in this connection is the work of Rubin,[3] who showed that hypodermic injections of alcohol, ether and chloroform render rabbits much more susceptible to systemic infections with streptococci and pneumococci, and that *in vitro* alcohol and chloroform diminish phagocytosis of pneumococci, streptococci and staphylococci.

Stewart[4] has shown that in normal human beings the ingestion of only a small amount of alcohol markedly lowers the opsonic index to the streptococcus and tubercle bacillus. Other observers have obtained results which to some extent agree with these just mentioned by showing that animals to which alcohol and ether have been given succumb much more readily to experimental infections than controls; particularly is this the case with those infections of which the immunity is chiefly phagocytic. Moreover, the clinical fact has long been recognized that alcoholism predisposes to such diseases as pneumonia, erysipelas, etc., in which phagocytosis plays a part.

Accordingly experiments were conducted to determine whether or not the fat-solvent power of the ether is the property by means of which it is capable of inhibiting phagocytosis. The problem was attacked by noting (1) the effect *in vitro* of the addition of a fat to blood, the phagocytic power of which had been reduced by the admixture of ether; (2) the effect *in vitro* of the addition to normal blood of ether previously saturated with a fat; and (3) the effect *in vivo* of injecting a fat into an animal subjected to an ether anesthesia. At first, lecithin was used because it is a fat-like substance which is almost universally present in the body. It was found that when lecithin was added in small amounts to the blood which had been subjected to the action of ether a prompt restoration of phagocytosis occurred. When ether was previously saturated with lecithin and then added to normal blood no diminution of phagocytosis was evident. Finally, when 0.1 gm. of lecithin was injected subcutaneously into etherized rabbits the phagocytic power of the animals' blood was restored to its preanesthetic condition in a few hours, whereas control rabbits which received a similar amount of physiologic salt solution showed a depression of phagocytosis which extended over a period of many hours. With the idea in mind that these results were not necessarily specific for lecithin, and that they might be obtained by the use of other ether-soluble substances, similar experiments were performed with olive-oil, a fat of widely different nature. Similar results were obtained, but it was found that in general more of the olive-oil was required to produce the effect. Moreover, it was observed that the injection of suitable amounts of the oil into the rectum was followed after three to six hours by a restoration of phagocytic powers, while, on the contrary, the injection of the same amount of physiologic salt solution had no appreciable effect in shortening the period of phagocytic depression. In the human experiments 5 ounces (160 c.c.) of warm olive-oil were passed slowly into the rectum through a tube immediately after the patient had returned from the operating-room.

The question has been raised why the injection of so small an amount of lecithin as 0.1 gm. should have an effect in restoring phagocytic power. A rabbit of 1,300 gm. weight may be assumed to have 100 gm. of blood, of which the plasma amounts to 52 gm. Hoppe-Seyler's analyses show that for 1,000 parts of plasma there are but 1.2 parts of fat. Therefore, in 50 gm. of plasma there would be 0.06 gm. of fat. Accordingly I have injected into each of my rabbits an amount of lecithin practically equal to twice the total amount of fat in his plasma. Of course, by a subcutaneous injection I do not get this amount into the circulation immediately, because fats are absorbed slowly from subcutaneous injections. However, I place something in the animal to which the circulating blood comes, and it is reasonable to assume that fat, when thus added in an amount equal to twice that normally in the plasma, may be capable of extracting from the blood a considerable amount of ether. I think the action of olive-oil per rectum may be explained in a manner similar to this, although since by the work of H. J. Hamburger and Edsall and Miller it has been shown that the large intestine can absorb a considerable amount of fat within a few hours, we might assume that at least a certain amount of the oil which we inject actually enters the blood-stream.

Another factor which concerns us here is that in all probability a certain amount of ether is present in the intestinal tract which may be held by the fat and thus prevented from becoming reabsorbed. Bongers has shown that chloroform is excreted into the stomach, and other workers have shown that it may be found in the alimentary tract after anesthesia. Although I am unaware that any investigation on this point has been carried out as regards ether, nevertheless, it seems reasonable to suppose that ether, too, gains access to the alimentary tract.

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[1] Meyer, Hans: Zur Theorie der Alcoholnarkose. Erste Mittheilung: Welche Eigenschaft der Anaesthetica bedingt ihre narcotische Wirkung? Arch. f. exper. Path. u. Pharmakol., 1899, xlii, 109. Baum, Fritz, and Meyer, Hans: Zweite Mittheilung; Ein physikalisch-chemischen Beitrag zur Theorie der Narcotica, ibid., 1899, xlii, 119.

[2] Overton: Studien über die Narkose, Jena, 1901.

[3] Rubin, George: The Influence of Alcohol, Ether and Chloroform on Natural Immunity in Its Relation to Leucocytosis and Phagocytosis, Jour. Infect. Dis., 1904, i, 425; The Influence of Alcohol and Chloroform on Phagocytosis *in Vitro*: The Journal A. M. A., 1907, xlviii, 1432.

[4] Stewart: The Influence of Alcohol on the Opsonic Power of the Blood, Jour. Inebr., 1907, xxiv, 197.

These results cannot be interpreted as proving beyond a doubt that ether inhibits phagocytosis by means of its fat-solvent power, but they are extremely suggestive that such is the case. The important rôle of fat-like substances in the phenomena of one of the other immune reactions, viz., hemolysis, has been shown by many investigators, and when it is considered that a disturbance of the lipoids of the cell may involve marked changes in its surface tension it seems not unreasonable to assume that such may be the explanation of the action of the fat-solvent drugs on the phagocytic system, at least as regards the leucocytes. The question then arises: Is the serum element of the system dependent on or identical with the lipoid content of the plasma? Is either opsonin itself, or opsonic complement, a fat-like body? This seems to be answered in the negative by two series of experiments which show (1) that when lecithin is added to a mixture of salt solution, washed corpuscles and bacteria, no more phagocytosis occurs than without lecithin: and (2) that the addition of lecithin fails to reactivate serum, the complement of which has been destroyed by heating at 56 C.

To what extent these results may have a practical bearing on the explanation and prophylaxis of postoperative infections it is impossible to say with certainty at this time. It is realized that from a limited number of observations no far-reaching conclusions bearing on a practical application can be made.

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A CYSTO-URETHROSCOPE *

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The great impetus given to the study of the posterior urethra by the invention of the Goldschmidt irrigation urethroscope has aroused hopes that still further improvements in the method of seeing the neck of the bladder and the posterior urethra could be expected. About one year and a half ago I attempted to overcome some of the shortcomings of the Goldschmidt and of other instruments by the employment of the Nitze type of indirect or right-angled telescope. By the adoption of an appropriate optical system and a new type of illumination I succeeded recently in constructing an instrument which gives a practically "normal" view of the trigone, neck of the bladder and posterior urethra. The shortcomings of the Goldschmidt instrument are well known. They are, briefly, a partial field, a distorted image and a large fenestra with its tendency to cause traumatism.

These have all been overcome in the new instrument, which consists of a sheath, obturator and telescope. The sheath is provided with a detachable beak, a small fenestra and two irrigating-cocks. The source of illumination in the original models was a lamp fitting into a globe which partly occluded the distal end of the window. In the new model (Figs. 1 and 2) an illuminating prism is employed. It is the same type of prism (Wappler) used in the telescope, but it is much larger. Its roof is backed like a mirror, and it doubly reflects the rays from the lamp, transplanting the source of illumination to the roof of the sheath, and bringing it in juxtaposition with the "eye" of the telescope. The telescope is furnished with the same type of prism which, however, is a "lens prism," one end being ground into a convex lens. The roof and the greater part of its floor, with the exception of the entrance pupil at the apex, are mirror surfaces. Figure 3, A and B, illustrates the difference in action of the Nitze-Otis and the new prism. In the latter we obtain upright images. The telescope is fitted eccentrically in the sheath and hugs the roof so as to carry the entrance pupil far away from the fenestra and, therefore, from the parts to be seen. With this telescope it is possible to reduce the size of approaching objects to such an extent that a perfect view of near objects can be obtained.

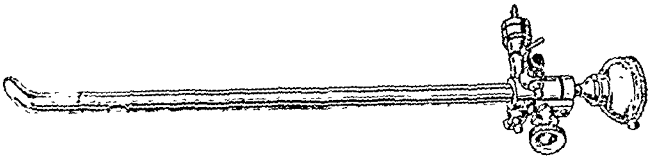

Fig. 1.—Sheath and telescope of cysto-urethroscope.

TECHNIC

The sheath with the obturator *in situ* is introduced into the bladder. Irrigation through the sheath, if the contents are cloudy, is next in order and then the telescope is inserted. *The introduction of fluid from now* on is carried on through one of the lateral cocks either with a Janet syringe or an irrigator. If the trigone and ureters are to be inspected I inject about 200 c.c. of boric acid. If the examination is limited to the neck of the bladder and posterior urethra, about 50 c.c. will suffice. The instrument is withdrawn and rotated, so as to gain a view of the whole of the sphincter. Then the floor of the posterior urethra can be seen, rotation of the instrument permitting observation of the lateral walls. By distending the urethra the images become smaller and magnification is produced at will by allowing the walls of the urethra to collapse. The roof and lateral walls are then brought into view by the same maneuver, the fenestra having been pushed into the bladder and turned upward. Throughout this process no traumatism is inflicted because of the small size of the fenestra. Practically every structure in the posterior urethra can be recognized; the colliculus, prostatic ducts and orifice of the utriculus can be seen in all cases. *After a little practice the ejaculatory ducts can be recognized.*

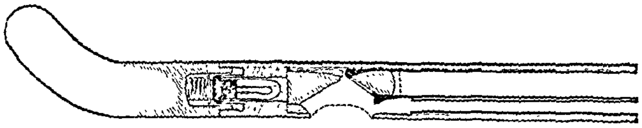

Fig. 2.—Diagram of sheath with telescope inserted.

Further uses of the instrument are the following:

1. The substitution of a long beak will permit of the examination of a very long posterior urethra, and the replacement of the curved beak by a blunt tip will allow its use for the anterior urethra.

2. Supplied with a short beak, or even as it is, the instrument could be used for inspecting the trigone and

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* Presented at the Section of Genito-Urinary Diseases, New York Academy of Medicine.

ureters of bladders that hold but very small amounts of fluid, 30 to 60 c.c.

3. Topical applications can be made after removing the telescope and drying out the sheath.
4. Double ureteral catheterization can be easily done, and a delicate filiform bougie can be passed into the utriculus or ejaculatory ducts under the direct control of the eye.
5. Treatment can be also carried out under direct control of the eye; a fine forceps or a galvano-cautery electrode be passed through the space below the telescope.

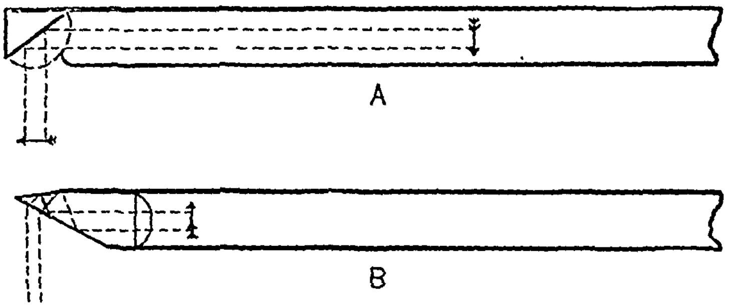

Fig. 3.—Action of Nitze-Otis (A) and new prism (B).

The advantages of the instrument are the following:

1. A perfectly normal view of the ureters, trigone, neck of bladder and posterior urethra can be obtained.
2. The amount of irrigation is reduced to a minimum; constant irrigation is unnecessary; intermittent injection of a little fluid suffices.
3. The small window makes rotation of the instrument possible and injury of the urethra is avoided.
4. By means of a new type of prism perfect illumination is provided and upright images are produced.

63 East Nineteenth Street.

EAR, NOSE AND THROAT SYMPTOMS IN DIABETES *

OTTO J. STEIN, M.D.
CHICAGO

In discussing ear, nose and throat symptoms in diabetes, it is assumed that all physicians are sufficiently conversant with a knowledge of the general pathology and symptomatology of the disease to render unnecessary any further reference to them. Furthermore, it is understood that what follows relative to this subject appertains to that variety of diabetes commonly understood as diabetes mellitus, and, although cognizant of other varieties of diabetes, erroneously designated as such, but which, in fact, are transitory glycosurias, produced by a multiplicity of causes, they have no special interest in this connection and at this time. In order to epitomize the subject, I will restrict this article to a discussion of the symptomatology of the ear, nose and throat.

Of the many manifestations of diabetes mellitus, it is a matter of surprise that the changes occurring in the mucous cavities of the head and neck should pass unrecognized, or, at least, without suspicion. This may be attributed to their seemingly trivial or unimportant character, but at the same time the fact that the cavities of the nose, throat and ear are easily accessible to examination furnishes sufficient reason for a more thorough interpretation of the changes that occur there, for by this means we may be led to early recognition of the disease. The participation of these cavities in this disease is by no means uncommon, although it is difficult to trace an unassailable array of signs and symptoms characteristic of the disorder. Nevertheless, one can catalogue a list of symptoms built on a knowledge of the general pathology, as we now understand it, that are of practical value.

In the mouth, evidences of perverted nutrition are frequently found about the teeth. Pyorrhea alveolaris and delayed healing after extraction are often associates of diabetes mellitus. The secretions of the mouth become distinctly acid in reaction, so that they act on the necks of the teeth, exposing the deeper and more sensitive parts to the ever-present infection within the mouth. The saliva itself, according to a number of observers, contains no sugar, but the sugar in the blood tends to increase the local infection, so that excessive deposits of lime salts, spongy and bleeding gums and carious teeth, causing aching teeth, are symptoms of importance in diabetes. These facts are now recognized by progressive dentists to the extent that the presence of diabetes in many cases can be diagnosed by them.

Aphthous stomatitis, thrush, a large red tongue, at times covered along the center by a black fur, hyperemia of the mucous membrane of the mouth, which at the same time looks glazed and feels dry, are frequent symptoms. When acetone is present in quantities, a distinct characteristic odor is imparted to the breath, which has the scent of acetic ether. The patient may even be aware of a sweetish taste. In a few cases sialorrhea, or excessive saliva, in place of the usual dry mouth, has been noted present in pancreatic disease, and hence may be suggestive of diabetes. A blunted sense of smell and taste have, in some instances, been recorded in this connection, and this is altogether possible as a sequence of the perverted metabolism.

In the throat, we are frequently confronted with the symptom of dryness, and when this is of a persistent nature it constitutes the leading symptom of this disease in this locality. This pharyngitis sicca is not to be interpreted as analogous to pharyngitis atrophica, for in the former the dryness is most likely "due to a modification of the chemical constituents of the glandular secretions," as Kyle says, and not to a true atrophy of the mucous glands and interstitial contractures, as in the latter. In the dry pharyngitis of diabetes the mucous membrane usually appears red and the secretions, in place of flowing, adhere, giving the surface a glazed appearance, like varnish. So important is this symptom to some observers that Moritz Schmidt says that in his experience a pharyngitis sicca, associated with such symptoms as mental hebetude, lassitude, furunculosis and cramps in the calves of the legs, is positive of the diagnosis of diabetes mellitus.

Although in a large number of cases it seems as if few structural changes take place in the tissues of the throat, exceptionally ulcers develop which bear a resemblance to those of tuberculosis. It is not an uncommon observation to find pulmonary tuberculosis complicating a diabetes mellitus, but few references are made to such an association in the throat. Hence it may be that when ulcers are present, especially with pharyngitis sicca, they may be tuberculous in character, although, to theorize, one might suggest that the altered secretion that dries may abrade the membrane, and thus precipitate infection, which is favored by the saccharine character of the

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* Read in a symposium on Diabetes before the Chicago Medical Society, Jan. 19, 1910

fluid of the tissues. These ulcers, according to Freudenthal, may occur on tonsils, pillars and the posterior wall of the pharynx. They are painful, but heal readily, and for this reason he concludes that they cannot be tuberculous.

Of external signs about the nose, it is of interest to note that von Neusser says, in reference to cyanosis in diabetes: "There are some cases of chronic diabetes with a slight cyanotic reddening of the ears and nose, resembling an alcoholic with a weak heart."

As to intranasal symptoms, nothing characteristic has been noted. Most writers on rhinology make scant mention of the subject. It is my belief that there are a number of cases presenting symptoms of intranasal irritation, such as hyperemia, hypersecretion, itching, sneezing and paresthesias, that, if carefully worked out, would show a relationship to diabetes mellitus. Kyle refers to two cases of diabetes mellitus in which there was acute coryza, which diminished as the amount of sugar lessened, and returned with its increase. An interesting case of nasal hydrorrhea in a case of glycosuria has recently been related to me by Dr. Brawley, which lends color to the possibility of such symptoms in diabetes. Kyle refers to ulcerations of the nasal mucous membrane occurring in diabetes, especially around the nasal orifice, where the itching causes rubbing and picking, the amount of sugar seeming to influence their growth.

The manifold variety of ear symptoms in the presence of diabetes often comes as a surprise to the casual observer. A manifestation often shown about the external ear is the presence within the canal of one or more furuncles. Here, as in furunculosis of different association, the essential cause is the *Staphylococcus pyogenes aureus*. In diabetics the sugar in the body tissues is peculiarly favorable to the growth of the micro-organisms, and, as the meatus of the ear is a constant habitat of the staphylococcus, the pruritus present in this disease gives occasion to frequent abrasion, with consequent infection. In cases presenting the history of recurrent furunculosis, it is well to investigate the composition of the urine.

Otitis externa diffusa chronica may be present, particularly the desquamative variety. Eczema auris is not an uncommon ear complication, and when present is prone to be very extensive; besides involving the auditory meatus, it may present itself in the various fossæ on the anterior aspect of the auricle; on the posterior surface of the auricle, particularly in the deep fold where it is attached to the head, and at times on the adjacent skin of the neck and scalp.

In all cases of extensive eczema auris other than those traceable to middle-ear discharges, I routinely subject the patient to an examination for diabetes, and thus frequently find the causative factor. Gangrene of the auricle occurs on rare occasions, and may be due to a peripheral neuritis, as taught by Auché.

Suppurative ear disease in the presence of diabetes is always a serious complication, but not necessarily an alarming one. The question as to a pathologic entity ascribed to diabetic otitis media and mastoiditis is still debatable. Kuhn, Kerner and MacCuen Smith are of the opinion that primary mastoiditis in diabetes is a fact, while Eulenstein, in an analysis of almost seventy cases, fails to find sufficient corroborative evidence to warrant the foundation of a special pathology in these cases. No doubt the mucous surfaces of the ears, like those of the nose and throat, are subjected to the likelihood of congestion by the elimination of toxins, and their secretions may also become perverted and easily infected. The mucous membrane of the Eustachian tube, tympanic cavity, mastoid antrum and cells, when affected by this congestion, secretes an excess of mucus that is highly susceptible to bacterial contamination, which consequently means a mucopurulent and sanguinolent product. Besides the congestion, there is a tendency to hemorrhage and extravasation in the submucosa and deeper tissues. Serous effusions and hemorrhage in the drum membrane may occur similar to that seen in Bright's disease. In such cases the pain is of short duration, but the acuity of hearing, being blunted, is the symptom complained of. A bleb of varying size, usually that of a millet seed, and of a dusky purple hue can be seen on the surface of the drum membrane. If it is ruptured, it may be mistaken for a perforated drum membrane of acute middle-ear origin. An otitis media that appears suddenly without apparent cause should lead to an investigation for diabetes. It has been my observation that in such cases little or no pain precedes a spontaneous rupture of the drum membrane, followed by a profuse discharge. The mastoid seems to be almost invariably involved. Kuhn, one of the earliest writers on this disease, speaks of the frequent occurrence of middle-ear suppuration in diabetes, and says that the discharge is profusely purulent, with a tendency to a sanguinolent character, and that the mastoid becomes extensively involved, as well as rapid involvement of the labyrinth. Bönninghaus says that in diabetics, in a very short time, extensive disintegration of the mastoid process takes place; often the first blow of the chisel through a brownish discolored cortex exposes a large granulating cavity, involving the entire process from tip to antrum, and even to the inner table. Both ears may become simultaneously involved, and extensive involvement of neighboring parts may occur.

Numerous instances are cited wherein, owing to the liability of bone caries and necrosis in these cases, the suppurative process creates a meningitis, phlebitis, thrombosis and brain abscess. Suppuration of the labyrinth is usually secondary to a suppurative process in the middle ear, and is not uncommon in the presence of diabetes. Friedrich, in his monograph, *"Die Eiterung des Ohrlabyrinths,"* concludes that about one suppurative labyrinthitis results in about every hundred cases of suppurative otitis media, and Bezold places diabetes mellitus as second in the list of chronic systemic causes of suppurative labyrinthitis. The cardinal symptoms of labyrinthine disease, namely, profound deafness, tinnitus and disturbances of equilibrium, both static and dynamic, may furnish the clew to some variety of labyrinthine involvement in diabetes, be this involvement due to hyperemia, hemorrhage or suppuration.

To reiterate, suppurative otitis media and suppurative labyrinthitis are commonly associated in diabetes, and hence we should be alert in all diabetics with otitic involvement for symptoms of panotitis.

In closing, I wish to refer to the neuritis of the acusticus in diabetes. Of the many well-known causes of neuritis causing deafness, such as loud noises, drugs, toxemias, rheumatism and constitutional diseases, among which may be mentioned diabetes, syphilis, malaria and typhoid fever, the former, namely, diabetes mellitus, is mentioned by Bönninghaus as the most frequent of all causes of such neuritis.

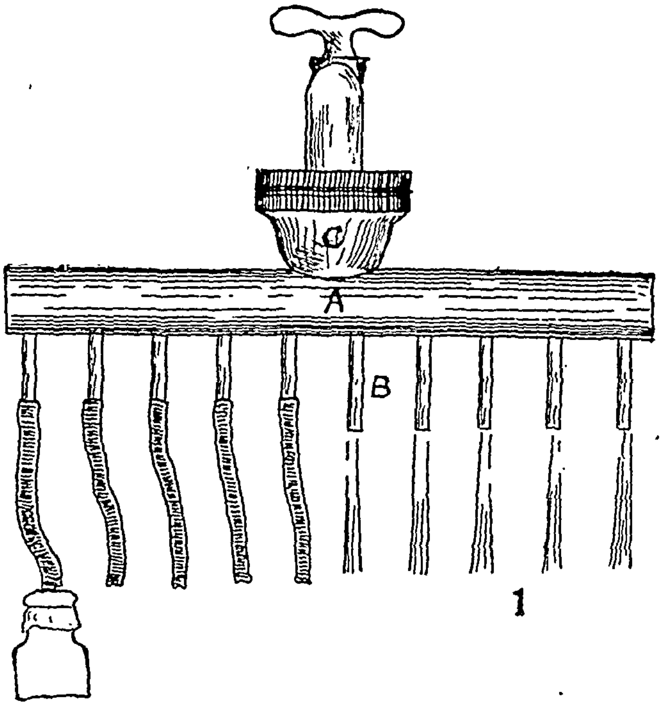
100 State Street.

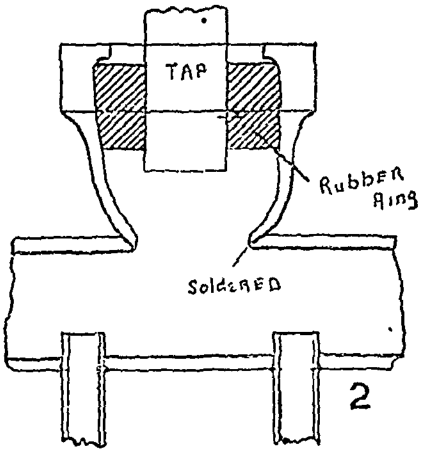
SEVERAL USEFUL LABORATORY DEVICES

MARTIN E. REHFUSS, M.D.
PHILADELPHIA

Rapidity in laboratory technic depends to a great extent on the simplicity and efficiency of the apparatus; a minimum of time and inconvenience being always an important factor in any method. The following two pieces of apparatus are exceedingly simple and are recommended for their comparative inexpensiveness as well as their general efficiency. They were devised to fill a need in certain work, and were so satisfactory that I have taken the liberty to report them.

The first is a method for multiplying the water connection in order that a large number of tissues may be washed from a single tap. For instance, in a laboratory where only a few taps are available, unless some multiplying device is employed, it becomes almost impossible to wash a series of tissues satisfactorily at one time. The result is overfixation with all its attendant evils, a circumstance occurring only too frequently in microscopic work. In carrying tissues through a large number of fixatives the need for such a device is equally apparent. The device (Fig. 1) fulfills all indications. It consists of ¾ inch bore brass tube about 12 inches long, closed at each end by brass plugs finished flush with the surface. Below on the tube, holes were drilled 1¼ inches apart. Into these holes brass tubing of 3/16 inch bore and 1¼ inches in length are inserted and firmly soldered in place. Directly opposite and in the center of tube A the connection C is attached. It consists of an outer brass collar (see section, Fig. 2) with an inner rubber ring or washer by which the multiplier can be attached to the tap. It is essentially the same as the connection found on filters, except that the filter connection is cut in half and the upper portion soldered to the tube into which a hole of corresponding size is drilled. The device may then be nickel plated and makes an excellent piece of apparatus. Dr. Allen J. Smith suggested that the ends of the small tubes B be made bulbous, so that rubber tubing may be firmly tied on and then closed with a clamp when not in use, or instead of that, the use of stop cocks in place of tubes B.





Figs. 1 and 2.—Device for multiplying water connection and longitudinal section of same.

A more convenient and elaborate modification of the above may be made as in Figure 3. In this form both A and C are cast in one piece, and the tube A is closed at the ends by milled screws, which can be removed to facilitate cleaning of the instrument. Through the holes drilled in tube A a number of brass stop cocks can be screwed—each cock possessing a flange below for the purpose of holding the rubber tubing as mentioned above. This apparatus gives perfect control over the distribution of the water supply.

Either form of device is merely inserted on the tap and may be removed or applied instantly. Bottles covered with gauze can be connected directly with tubes B, or rubber tubes may be attached to the latter to lead anywhere. With even slight pressure no difficulty is experienced in making the water emerge from all the tubes at once. An apparatus of this kind has been used in the histologic laboratory of the University of Pennsylvania and has given entire satisfaction.

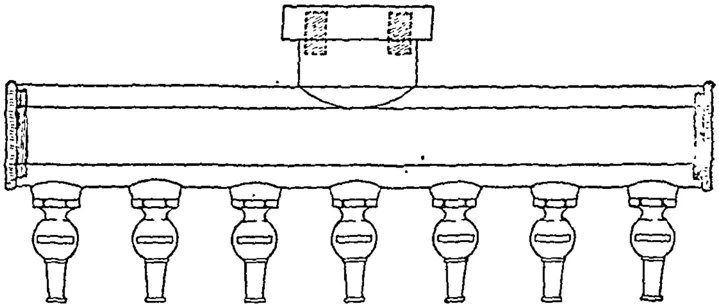


Fig. 3.—Another form of above device.

The next apparatus is a simple device for staining a large number of cover glasses at one time. Any one who has stained a series of one hundred or two hundred cover glasses knows how time-consuming such a procedure is. Having tried wire holders, perforated plates, etc., I have found none so convenient or so easily handled as the following (Figs. 4, 5 and 6): two metal (bronze or brass) strips (B) ⅝x2½x⅛ inches, connected by the middle bar (C) ¾ inch in length, are soldered together. Each metal strip has a number of parallel grooves 1/16 inch wide and 1/16 inch deep. Twenty such grooves are made in this instrument so that twenty cover glasses can be accommodated singly or forty back to back. Along the edge of each strip an extra strip of brass is soldered to act as a ledge (D). Then in the center of the connecting strip C a brass handle is screwed.

The above are the dimensions for an instrument which will take ⅞ inch or 22 mm. cover slips; of course, these can be modified to fit any sized cover glasses. In this way films, smears, or even sections may be carried through various solutions. Its advantages are:

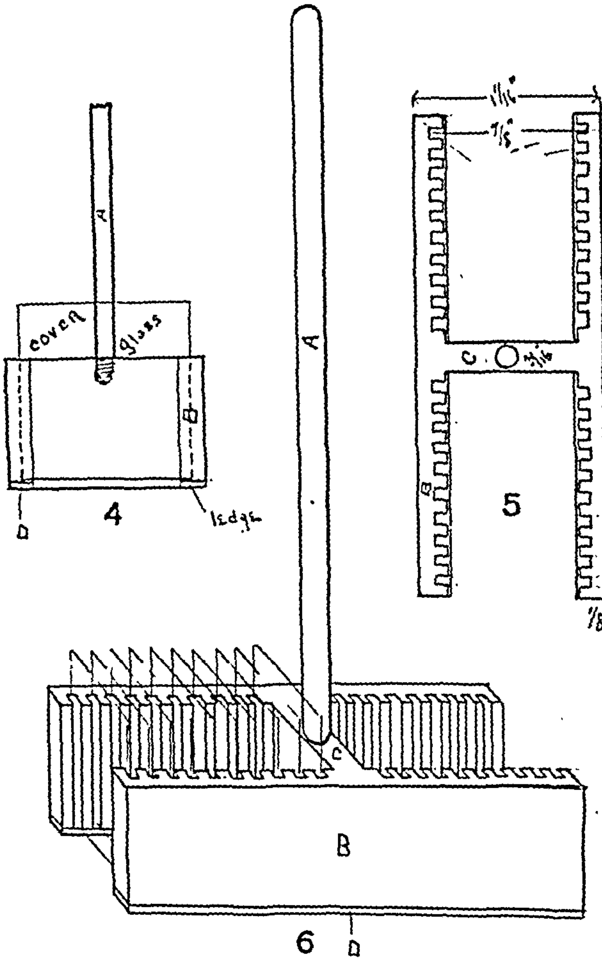
1. A uniform and complete covering of the cover glass is insured.

2. The metal strips B are ⅝ inch in height, allowing the ⅞ inch cover glasses to project ¼ inch, thus per-

mitting them to be more easily handled and manipulated.

3. Being 2½ inches long, it is easily introduced into a 3 inch reagent dish.

4. On the principle of the above any number of compartments can be made. By widening grooves and increasing the length of cross bar (C) the same instrument can be used to carry slides. Recently I have stained sections on cover glasses and find that the use of the above apparatus leaves nothing to be desired.



Figs. 4, 5 and 6.—Apparatus to be used in staining a number of sections at one time.

In using stains such as blood stains, it is well to determine beforehand the exact time necessary to stain and differentiate with a few single specimens in order that the entire series may be correct.

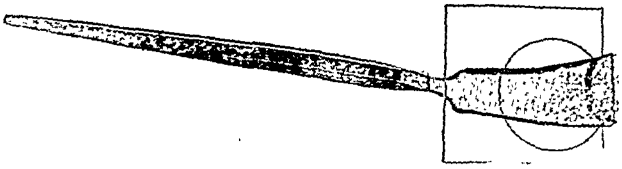


Fig. 7.—Section lifter bent in the form of a spring clamp for handling single specimens on cover slips.

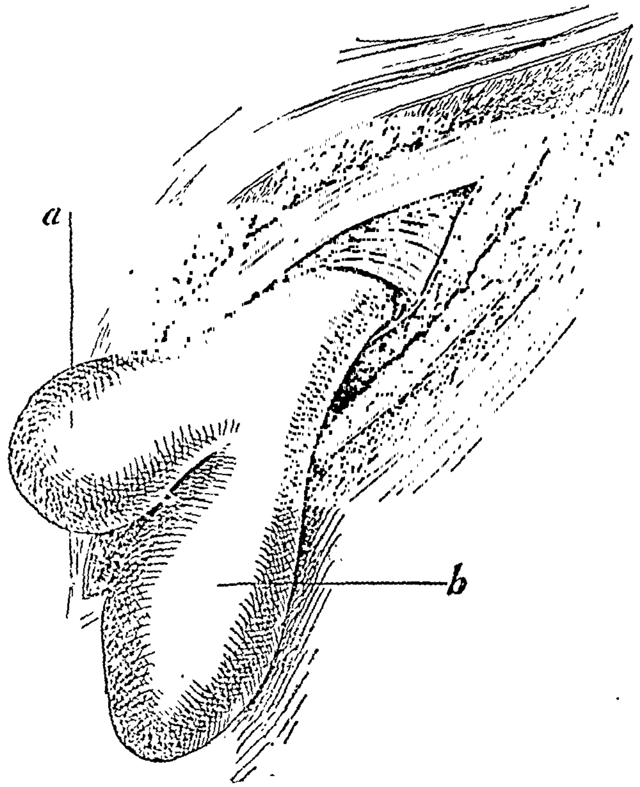
In manipulating single specimens on cover slips in various stains, etc., especially in small flat staining dishes where it is impossible to introduce the ordinary cover glass forceps, it is frequently of considerable service to turn up the edge of the section lifter (Fig. 7) so as to form a spring clamp, in which the cover glass may be inserted. This gives good control over the specimen and will serve many useful purposes.

1417 South Broad Street.

RARE VARIETY OF HERNIAL SAC

DANIEL N. EISENDRATH, M.D.
CHICAGO

The accompanying illustration shows a variety of hernial sac, the existence of which is but little known, and which does not seem to be referred to in the textbooks and other literature. I have encountered this form of double or "pantaloon" sac four times in my last one hundred cases of inguinal hernia. It is a bifid sac, the two limbs having a common sac where they unite, close to the internal ring. In some cases, the two sacs (a and b) are of almost equal length, resembling a man's trousers, so the name "pantaloon" seems to describe the anatomic condition accurately. I do not know by whom the term "pantaloon sac" was first employed to designate this double sac. In other cases the second sac is a mere diverticulum which leaves the main sac close to its neck and is usually so covered with fat as to be mistaken for a subserous lipoma. No doubt many recurrences following inguinal herniotomy are due to the fact that a diverticulum or second sac has been overlooked. My present practice is to separate the sac from the spermatic cord as high up as possible and to insert the finger into the sac to determine the presence or absence of diverticular sacs before proceeding to ligate the neck of the hernial sac, close to the internal ring.



Pantaloon or double hernial sac; a, secondary sac often covered by fat; b, main sac.

103 State Street.

Diagnosis of Chronic Pancreatitis.—No single symptom can alone be relied on as diagnostic of chronic pancreatitis, but on considering all the available evidence there is not usually much difficulty in forming an opinion. Special stress can be laid on the progressive wasting, the usual presence of jaundice, the dyspeptic disturbances, the pancreatic reaction in the urine, and the results of the chemical examination of the urine and feces.—A. W. Mayo Robson, in *Annals of Medical Practice*.

AN IMPROVED NEEDLE-HOLDER

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Passed Assistant Surgeon, U. S. Navy, Assigned to the U. S. Naval Hospital
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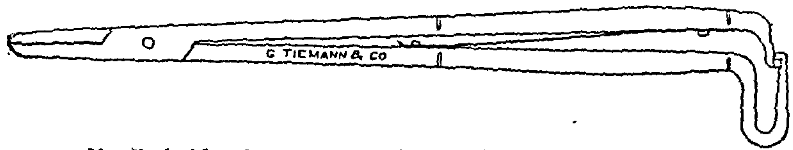
This instrument was devised to facilitate the suture operation for hemorrhoids, and to accompany the hemorrhoidal clamp, a description of which was published in 1909.*

The object of the design is to do away with the width of handle seen in other holders, which obstructs the view when working in deep or small cavities. The instrument illustrated measures 13/16 of an inch at the widest point on the handle. With the drop ratchet, which is below the level of the shank, forming a pistol grip, the instrument can be grasped in such a manner as to leave an unobstructed view of the needle along the upper surface of the handle and shank. The instrument is particularly adapted to rectal, vaginal and deep abdominal work. The length over all is 8½ inches. The rachet, which is dropped at right angles to the handle, measures 1¾ inches.



Needle-holder for rectal, vaginal and deep abdominal work.

NOTE ON STROPHANTHIN

ROBERT A. HATCHER, M.D.
Professor of Pharmacology in Cornell University Medical School;
Member of the Council on Pharmacy and Chemistry
of the American Medical Association
NEW YORK

It has been my intention for some time past to discuss the literature of strophanthin exhaustively. I have not yet been able to perform this task, but certain conditions have arisen which, unless counteracted by a word of warning, will entail accidents, thereby bringing this drug into disrepute at the very time when it gives the greatest promise of usefulness.

I have stated[1] that the tincture of strophanthus generally sold in the United States is of fairly uniform potency, and that the strophanthin of Merck and that of Boehringer and Sons are of practically the same activity, being about half as active as the crystalline ouabain, or so-called crystalline strophanthin of Thoms made by Merck.[2]

We have examined many specimens of strophanthus seed and tincture of strophanthus in the laboratory of the Department of Pharmacology and Materia Medica of Cornell University Medical College during the past three years, and have found them to be practically uniform in potency; but the government now excludes *Strophanthus hispidus*, admitting only the *Strophanthus kombé*, and we have found a specimen of the *Strophanthus kombé* just half as active as the *Strophanthus hispidus*. Recently we obtained a specimen of tincture of strophanthus from Bellevue Hospital which was also just half as active as those tinctures previously examined. This tincture was being used in the hospital without the slightest suspicion that it was not of exactly the same potency as that which had been used previously and which we had found to be twice as active as the later specimen.

The intravenous, as well as the intramuscular, use of strophanthin is based largely on the experience of Fraenkel,[3] who stated expressly that he used the amorphous strophanthin of Boehringer and Sons, the activity of this amorphous strophanthin being given as 15 frog units for each milligram of strophanthin. The frog unit conveys little idea to the mind of the average clinician, even if it were not true that various standards have been proposed for the frog unit, and if it were not also true that the therapeutic dose of strophanthus is not the same in frog units for strophanthus that it is for digitalis.

In this connection I wish to call attention again to the very simple and accurate standard which I have proposed for strophanthus preparations, viz., the cat unit, or that amount of strophanthin, or strophanthus, which is just fatal to 1 kg. of cat when it is slowly injected in about an hour and a half into the femoral vein.

Working with solutions of unknown strength we have repeatedly found that the limits of error do not exceed 5 per cent., and often they fall within 2 per cent.

Edmunds and Hale[4] have objected to this method on the ground that the action on the central nervous system cannot be excluded, but I have good reason for believing that this test is a far better index of the cardiac action on man than the frog test is.

Boehringer and Sons have put strophanthin on the market labeled "Strophanthin Boehringer for intravenous injections based on the investigations of Dr. Albert Fraenkel, Badenweiler. Twelve tubes, each containing 1 c.c. of sterilized 1/00 solution of strophanthin Boehringer."

The clinician might suppose that each tube actually contained just 1 c.c. of the solution, but several of these tubes were examined and found to contain 1.4, 1.2, and 1.4 c.c., respectively.

Hatcher and Bailey[5] reported that amorphous strophanthin was about half as active as the crystalline, and that the strophanthins of Merck and of Boehringer and Sons (amorphous) were of about equal potency.

This statement was based on a much larger number of experiments than had been performed by any other experimenter, so far as I am aware. Owing to the nature of the work, some of the tests had to be limited to a few animals, and with the greater precision of our present method we have found a slightly different ratio in some cases, and a greater difference in others. By subcutaneous injection, the amorphous strophanthin is, as stated, about half as active as the crystalline, but by intravenous injection some specimens at least approach the crystalline in toxicity for cats as will be seen by the accompanying table.

We have recently confirmed the statement made by Hatcher and Bailey[5] that the crystalline is twice as toxic as the amorphous for dogs by the vein.

It must be borne in mind that the amorphous strophanthin varies somewhat in activity, but so far we have found no variation in the activity of the crystalline.

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* Jenness, B. F.: A New Hemorrhoidal Clamp and Speculum, THE JOURNAL A. M. A., June 26, 1909, lii, 1210.

[1] Hatcher, R. A.: Tincture of Strophanthus, THE JOURNAL A. M. A., 1907, xlviii, 1177.

[2] This crystalline strophanthin is not sold when Merck's strophanthin, or even Merck's crystalline strophanthin, is called for, since the official strophanthin is sometimes described as crystalline though it is really amorphous. The so-called crystalline strophanthin Thoms should be called crystalline ouabain.

[3] Fraenkel and Schwartz: Arch. exper. Path. u. Pharmakol., 1907, lvii, 79.

[4] Edmunds and Hale: Bull. 48, Hyg. Lab., U. S. P. H. and M.-H. S., 1908.

[5] Hatcher, R. A., and Bailey, H. C., Tincture of Strophanthus and Strophanthin, THE JOURNAL A. M. A., Jan. 2, 1909, lii, 5.

There is no apparent reason why this disadvantage of the amorphous, as well as of the tincture, may not be obviated by the use of a simple standard on which alone the therapeutic dose should be based.

Several accidents have been reported to me orally, following the subcutaneous injection of the tincture, and with the increasing use of strophanthin by the intramuscular and intravenous methods other accidents are very likely to occur unless care is taken to use only standardized preparations and to know the value of the standard employed.

The therapeutic dose of strophanthin by the vein should be approximately equal to five cat units; the daily dose by the mouth is probably about fifty cat units, though, as I have stated,[6] the use of strophanthus by the mouth is irrational in the present state of our knowledge concerning its absorption from the alimentary canal and its excretion and destruction in the body.

It has been stated that the oil contained in strophanthus seed is the cause of nausea, but we have found enormous doses of this oil to be without effect on cats; the emesis, on the other hand, results from the action of strophanthin on the medullary centers.

From the table it will be seen that the average therapeutic dose would be about 0.5 mg. (1/130 grain) of crystalline or amorphous strophanthin, or a little more of the latter, by vein; the intramuscular dose of the more active tincture should not exceed two minims daily.

It is a curious fact that, while the fatal dose of crystalline strophanthin by subcutaneous injection is only about 20 per cent. larger than the fatal intravenous dose for the cat, in the case of the amorphous more than twice as much is required by subcutaneous injection as by intravenous. Whether man shows the same difference or not we are unable to say. Intramuscular injections usually approach the intravenous in effectiveness.

TABLE GIVING THE SEVERAL AMOUNTS OF THE VARIOUS SUBSTANCES WHICH EQUAL ONE CAT UNIT

	Mg.	
A.....	0.1	Crystalline ouabain. (So-called cryst. strophanthin Thoms.)
B.....	0.135	Amorph. strophanthin. B. & S. in sealed tubes.
C.....	0.140	Amorph. strophanthin. B. & S. sold in powder. Sample A.
D.....	0.170	Amorph. strophanthin. B. & S. sold in powder. Sample B.
E.....	0.171	Amorph. strophanthin. Merck's, sold in powder.
F.....	3.5	Strophanthus seeds. (Many different samples.)
G.....	7.0	Strophanthus seeds. Kombé.
H.....	35.0	Tinct. strophanthus seeds. (Many different samples.)
I......	70.0	Tinct. strophanthus seeds. (Recently obtained from Bellevue.)

414 East Twenty-sixth Street.

Exophthalmic Goiter and Acute Articular Rheumatism.—Souques reports a case in which acute articular rheumatism was followed almost at once by development of symptoms of exophthalmic goiter. There was no history of alcoholism in the family. In two other cases acute articular rheumatism preceded the exophthalmic goiter in one case and in the other the mother and brother had had acute articular rheumatism. It is not long since Vincent found enlargement of the thyroid in two-thirds of all his cases of acute rheumatism, but it generally disappeared with it, leaving no traces. In other cases hyperfunctioning of the thyroid was evident in the tachycardia and nervous symptoms, and in 4 out of 6 such cases the exophthalmic goiter followed without transition; 3 similar cases have been reported by others. In a later series of 14 cases Vincent found a history of one or more attacks of acute articular rheumatism preceding the exophthalmic goiter. Souques' article was published in the *Bull. de la Soc. méd. des Hôp.*, 1910, xxvii, 26.

SCOPOLAMIN AND MORPHIN AS A PRELIMINARY TO GENERAL ANESTHESIA

A REPORT BASED ON AN EXPERIENCE OF ELEVEN HUNDRED CASES *

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To one who studies medical literature, the large number of articles on anesthesia seem to indicate that the ideal anesthetic has not been discovered or the ideal method of administration has not been invented. When anesthesia was first discovered, the only demand was that it relieve the patient of the knowledge of all pain during an operation. Additional demands have been made from time to time, however, until now the patient asks that he not only be relieved from the knowledge of pain, but that the anesthesia will be free from danger and discomfort to him. The surgeon insists that the anesthesia shall be free from danger and that the patient shall be quiet and passive, with the muscles relaxed, during the entire time of the operation.

Practically all the dangers can be avoided by an expert anesthetist in the judicious choice of the anesthetic and a skilful method of administration. This is evidenced by the reports of a large number of anesthesias given without a fatality in different parts of the country.[1, 2] Very much of the discomfort experienced by the patient while "going under" may be avoided by expertness on the part of the anesthetist, and a first-class anesthetist will give a smooth, uniform anesthesia that will keep the patient asleep and relaxed throughout the operation in response to the surgeon's requirements. These demands on the anesthetist are fast making the administration of anesthetics a special line of work, and the day seems not far distant when patients will insist that the anesthetist be trained and experienced in that particular part of the operative procedure.

With all the improvements in the choice of anesthetics and the method of their administration, there still remains with the patient a strong disinclination toward being put to sleep and passing through unknown dangers while utterly powerless to help himself in any way. This decided antipathy to being made unconscious amounts at times to a positive terror, and has been advanced as a cause of some of the sudden deaths reported under anesthesia. It was a desire to overcome this unpleasant feature that led me to use the combination of scopolamin and morphin as a preliminary to general anesthesia on myself at one time when I changed places and became, for the time being, patient instead of surgeon. The action of the preliminary was so satisfactory that I adopted its use in my work, and the following report, based on 1,120 cases in which it was used, is made so that the truth concerning this much abused combination may be ascertained.

My attention was first called to the use of the combination of 1/100 grain of scopolamin and 1/6 grain of morphin as a preliminary to a general anesthetic by an article by Dr. M. G. Seelig.[3] Since then, the combination has occupied a prominent place in the literature on anesthesia and much has been written for and against its use. My experience seems to prove that some of the things written are erroneous. Much of the misinformation has come from a failure to differentiate the use of the combination as a general anesthetic, in which a large dose is given, from its use as a preliminary to some other general anesthetic, in which the dose is comparatively small. The experience related in this article is based on its use as a preliminary. As many things have been written that are contrary to my experience, a brief reference to some of them may not be out of place.

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[6] Hatcher, R. A., Am. Jour. Physiol., 1909, xxiii, 304.

* Read before the Western Surgical and Gynecological Association at Omaha, Dec. 21, 1909.

1. Magaw, Alice: A Review of Over Fourteen Thousand Surgical Anesthesias. Surg., Gynec. and Obst., December, 1906, p. 795.

2. Teter, C. K.: Thirteen Thousand Administrations of Nitrous Oxide and Oxygen as an Anesthetic, THE JOURNAL A. M. A., Aug. 7, 1909, p. 448.

3. Seelig, M. G.: Scopolamin-Morphin as an Adjuvant in the Administration of General Anesthesia, Ann. Surg., August, 1905, p. 185.

In 1905 Dr. Felix Terrier,[4] of Paris, wrote in relation to the scopolamin and morphin combination: "It should be noted that when we wish or are obliged to employ another anesthetic, as well, we must never use ether, but always chloroform." In another place he says again: "We call attention once more to the fact that scopolamin should never be combined with ether, whose dangers it increases." In a large majority of the patients here referred to, the scopolamin-morphin combination was given as a preliminary to ether anesthesia, and no harmful effects were noticed.

In December, 1908, Dr. J. C. Bloodgood,[5] in abstracting a German article on the scopolamin and morphin combination, says: "It is contraindicated in exophthalmic goiter." I use more of the combination in exophthalmic goiter cases, because, in the effort to "steal the gland," as Crile recommends, I give a dose the night before in addition to the dose given preliminary to the general anesthetic. I have seen no harmful results in the exophthalmic goiter cases. In the same abstract Dr. Bloodgood says: "It is difficult, however, in an active clinic to know in all cases when the hour before the operation will be." This is true, but it can be managed. I have frequently had a series of eight and ten cases on an operating morning, and each patient had the preliminary dose of scopolamin and morphin at approximately the proper time.

It has been urged that the scopolamin and morphin combination produces a contraction of the abdominal muscles that makes operating more difficult. I have not found this to be true. I have noticed, however, that it is difficult sometimes for the anesthetist to tell just when the patient is properly under the general anesthetic. He lies so quietly under the influence of the scopolamin and morphin that the anesthetist is apt to think that he is ready and properly relaxed when he is not. In those cases some contraction of the abdominal muscles will be noticed. A little more of the general anesthetic quickly remedies it.

In reply to the question of a correspondent The Journal of the American Medical Association[6] says: "It [referring to scopolamin] is used for local anesthesia in connection with morphin." I have never seen any local anesthetic effects produced by the combination and have not heard of it being used in that way. Dr. H. C. Wood, Jr.,[7] of Philadelphia, condemns the use of the combination strongly as a preliminary, although giving no personal experience on which to base his disapproval of its use.

The foregoing extracts are quoted to show what a large amount of misinformation has crept into the literature. On the other hand, since Dr. Seelig's report of sixty-five cases in 1905, other reports are coming in telling of the beneficent effects of this combination when used as a preliminary to general anesthesia, and these reports are based on a large experience. Dr. C. M. Nicholson[8] reported to this association, at its last meeting, 650 cases in which the combination had been used with no unfavorable results. He also reported the results of experiments on animals which seemed to contradict the conclusions of Whitacre,[9] who claimed that the scopolamin-morphin combination produced fatty degeneration of the kidneys and liver when injected into animals.

It looks very much as if the prophecy made by Dr. James Taylor Gwathmey[10] was coming true. He said: "But the administration of grain 1/100 scopolamin and grain 1/6 morphin one-half hour before the operation and supplementing this by as much of any general pulmonary anesthetic as may be necessary is theoretically correct and clinically safe. . . . The combination of scopolamin and morphin or chloretone or cocain locally, plus a small amount of some pulmonary anesthetic, will undoubtedly be the anesthetic of the future." My experience corroborates fully the experience of Dr. Gwathmey as related in the article from which the above was quoted.

TECHNIC OF ADMINISTRATION

Tablets are obtained containing a combination of scopolamin, 1/100 grain, and morphin, 1/6 grain, and the solution is made just before it is administered hypodermically, which is done one and one-half hours before the operation is begun. Relatives or friends are not allowed to see the patient after the hypodermic has been given. Sometimes an exception is made in the case of a husband and wife, but imperative instructions are given that the patient is not to be talked to and roused.

All necessary manipulations and handling of the patient in the preparation are completed before the hypodermic is administered. The room is darkened and everything kept quiet, and he falls into a tranquil slumber. About twenty minutes before the operation a layer of damp cotton is placed over the eyes and the patient is taken to the operating room and placed on the operating table. The preliminary cleansing of the skin over the site of the operation is gently done while the general anesthetic is being administered. The preparation and the anesthetization are usually completed about the same time and the operation proceeds.

The preliminary hypodermic injection of the combination is given to all patients from eight years of age up. If an elderly patient is considered strong enough to undergo an operation, he is considered strong enough to have the beneficial effects of the combination and it has not been withheld from any elderly patient on account of his age. Children are more apt to be nervous and apprehensive immediately prior to the operation than adults; therefore the preliminary is given to all children who are eight years old and older. There is a strong nervous factor in exophthalmic goiter cases, and it has been claimed that nervous excitement increases the secretion of the gland which is already overactive. For this reason I give the preliminary the night before the operation in these cases and again one and one-half hours before.

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[4] Terrier, Felix: Use of Scopolamin as a General Anesthetic in Surgery, Internat. Clin., Series 15, ii, 228.

[5] Bloodgood, J. C.: Scopolamin-Morphin Narcosis, Prog. Med., December, 1908, p. 128.

[6] Scopolamin-Morphin Anesthesia, The Journal A. M. A., Dec. 9, 1905, p. 1817.

[7] Wood, H. C., Jr.: Status of Scopolamin-Morphin Anesthesia, The Journal A. M. A., Jan. 1907, p. 159.

[8] Nicholson, C. M.: A Study of the Action of Scopolamin-Morphin on the Heart, Liver and Kidneys. Report of Six Hundred and Fifty Cases of Scopolamin-Morphin Administrations Preliminary to General Anesthesia, The Journal A. M. A., April 3, 1909, p. 1096.

[9] Whitacre, H. J.: Scopolamin-Morphin-Chloroform Anesthesia, New York Med. Jour., March 31, 1906, p. 637.

[10] Gwathmey, James Taylor: A Plea for the Scientific Administration of Anesthetics, The Journal A. M. A., Oct. 27, 1906, p. 1361.

I have not found any contraindication to the combination. If a patient's condition is sufficiently good to make an operation justifiable it is sufficiently good to permit the use of the preliminary injection of scopolamin and morphin. Very ill patients do better when very little general anesthetic is given them, and the preliminary of scopolamin and morphin permits the minimum amount of the general anesthetic to produce the desired amount of anesthesia.

When I first began to use the combination I used some chloroform as a general anesthetic, but I quit using chloroform after a time and began using ether almost exclusively. In the majority of the cases embodied in this report the combination was used as a preliminary to ether as a general anesthetic. Lately I have been using nitrous-oxid gas to a considerable extent and find that the scopolamin and morphin combination acts equally well as a preliminary to that general anesthetic. There is a great deal less of the convulsive movement of the muscles as the patient is going under the influence of the gas when the preliminary is used.

I used the much advertised hyoscin-morphin-cactin combination in about seventy cases, but could see no advantage in its use and went back to the scopolamin and morphin. I used the morphin and atropin combination in a few cases, but could see no reason for continuing its use when the scopolamin and morphin combination will do all that the morphin and atropin combination will do and give, in addition, the added hypnotic influence of the scopolamin.

There have been no deaths that could be in any way attributed to the preliminary use of scopolamin and morphin. There were unpleasant symptoms in only one case. In 1907, among the early cases reported in this series, one patient had some symptoms which seemed dangerous at the time. The patient was a woman, aged 23, and the following is the record of the case:

> She was given the usual dose of scopolamin and morphin at 2:30 p. m. and the operation was started at 4 p. m. She came into the operating room drowsy and in the usual condition after the preliminary injection of scopolamin and morphin. The appendix was removed and the uterus suspended. The length of the operation was twenty-four minutes. She was put to bed and normal salt solution given by rectum with the foot of the bed elevated. At 5:45 p. m. the nurse found her face blue and that she was breathing very slowly. It looked to the sister in charge as if the respirations had almost stopped. The sister pulled out the tongue with forceps, performed artificial respiration, and dilated the rectum. I saw the patient at 6:15 p. m. Her face was then a reddish blue, the pupils partially contracted and insensible to light, respirations 8 to the minute and a full pulse 96 to the minute. I ordered an enema of hot coffee which was given. In fifteen minutes the woman began to improve and at 7:15 p. m. she was breathing naturally, her face was a normal color, and she was talking and complaining of feeling thirsty. The general condition and symptoms seemed to be that of morphin poisoning. It was surprising that the bad symptoms came on so late, more than three hours after the preliminary injection. Her further recovery was uneventful.

Either the patient had an idiosyncrasy for one of the drugs, or the tablets did not contain a uniform dosage and the tablet given her contained more than the usual dose. I am inclined to the latter explanation because I have seen no bad effects since. For the past year the anesthetizers have noticed a more uniform effect of the combination on the patients and we are inclined to attribute it to a better tablet with a correct dose.

About thirty minutes after receiving the hypodermic the patient becomes drowsy and is an eligible candidate for the "Don't Worry Club." All apprehension and fear regarding the operation is gone. He can be easily aroused, but should not be disturbed. He is partially asleep when taken to the operating room and in a tranquil condition of mind. The transition from a partial sleep to complete anesthesia is not so sudden as from complete wakefulness to complete anesthesia and is easily accomplished. A much less quantity of the general anesthetic is required to keep him completely anesthetized. After the operation he usually sleeps from three to five hours, and may partially awake and go to sleep again two or three times before becoming completely awake. The sleep after the operation saves him from the smarting pain of the recently incised skin and injured tissues.

There is much less postoperative vomiting, about nine patients out of ten having practically none at all. The secretion of mucus in the throat is markedly checked and in most of the cases is completely stopped. This prevents the danger of aspirating mucus into the respiratory passages and makes a quiet anesthesia.

The above experience based on eleven hundred cases seems to show that scopolamin and morphin as a preliminary to general anesthesia is a rational procedure, adding greatly to the comfort of the patient by relieving him of all nervous apprehension prior to the administration of the general anesthetic, by permitting him to sleep some hours after the operation is completed, and by greatly decreasing the postoperative vomiting, and mitigating the dangers of the general anesthetic by lessening the amount necessary to produce the desired effect and by checking the secretion of mucus in the throat.

402 Observatory Building.

A CASE OF SYPHILIS OF THE LIVER, PROBABLY LATE CONGENITAL SYPHILIS *

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The art of diagnosis has not yet become so easy that it has altogether lost its charm, and now and then we meet a problem that, like the plot of a well-constructed novel, baffles solution until the last chapter. Such a diagnostic problem was the one about to be recorded, and, though its solution seems to have been satisfactorily reached, the fact remains that the last chapter has not yet been read and a degree of uncertainty must, therefore, still exist.

Patient.—There came to the clinic of Cooper Medical College last September (1909) a young man aged 18 who complained of a swollen abdomen. Cursory examination showed that he had an ascites and he was therefore sent to the ward in Lane Hospital for further investigation. As his case proved to be an unusual one, where every scrap of available evidence was essential, his history will be given in detail, so far as we were able to obtain it.

Family History.—The father had been drowned at sea some years before; he had no disease at the time so far as known. The mother was living and in fair health; she had had but one miscarriage; and this subsequent to the birth of this patient; she said her hair had fallen out at the time of the birth of this child and subsequently; she had had no ulcers or soreness of the nipples while nursing him; recently she had had some slight pulmonary symptoms—cough and expectoration. There were three sisters living and well, no children dead. There had never been any disease in the family similar to his own.

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* Read before the Cooper College Science Club, Jan. 10, 1910.

Past History.—The boy had whooping cough and mumps in childhood, but no measles, scarlet fever or diphtheria. At 8 years of age he had a prolonged cough, but with no blood in the sputum. He never had typhoid, pneumonia or malaria. He never had gonorrhea or a venereal sore, and denied all exposure. There had been no skin eruption at any time, and no sore throat. He took a couple of glasses of beer each evening but no other alcoholic drink. He did not use tobacco in any form. He worked as a boiler maker and his habits of life were regular.

Recent History.—Six months previous to coming to the clinic he had been operated on for inguinal hernia. Following that operation he developed pleurisy on both sides, with considerable pain but not enough fluid to require aspiration. He apparently recovered from that entirely and remained well and at work for several months afterward.

Present Illness.—About three weeks before presenting himself at the clinic he noticed that his abdomen began to swell. At that time he had been eating freely of fruit and drinking large quantities of water, to which he attributed the swelling. He had no pain at all in the abdomen when the swelling began, and only slight pain at times since then. His bowels had been constipated rather than loose. There had been no vomiting or disturbance of digestion. He had no cough and no pain in the chest; but felt that he had fever each afternoon, and every night recently he had a sweat. He did not think he had lost in weight, but felt weak and unable to work.

Physical Examination.—The patient was poorly developed, moderately emaciated, pale and slightly icteric. Ears appeared normal; eyes showed no corneal scars, pupils reacted equally; nose was normal in contour; mouth showed teeth in good condition, tongue slightly coated on dorsum and bright red along sides. Throat showed no ulcerations, plaques, unusual redness, nor tonsil hypertrophy. Cervical glands were not enlarged.

Chest.—Clavicles were prominent, musculature poor, ribs all plainly visible; expansion limited. On percussion, with patient lying on the back, on the right side dulness began at the fourth rib, and traced downward was continuous over the base of the lung with that of the liver below; on the left side dulness began at the level of the nipple and was continuous downward for 19 cm. in the anterior axillary line. Examining the back with patient erect, dulness was found over the right base as high as the fifth dorsal spine and over the left as high as the seventh. Below the line of dulness vocal fremitus was everywhere absent. The breath sounds over both upper lobes, front and back, were loud and free from râles but harsh and bronchovesicular; below the line of dulness they gradually diminished and then disappeared entirely.

Heart.—The cardiac impulse lay high in the chest, visible in the second, third and fourth left intercostal spaces, with the maximum in the fourth space 4 cm. internal to the nipple line. The area of cardiac dulness merged with that over the lungs. The heart sounds were all clear except for a soft systolic murmur over the pulmonic area.

Abdomen.—On inspection this was symmetrically distended; over its surface and that of the lower thorax many dilated veins were visible; in the left inguinal region was the scar of the old hernia operation. Palpation gave a distinct fluctuation wave across the abdomen; in the upper abdomen, on the right side a hard, smooth, rounded mass could be felt on deep inspiration, resembling the lower border of the liver; on the left side on deep inspiration, the edge of the spleen could easily be made out below the costal margin; but no other masses could be palpated elsewhere in the abdomen, and there were no enlarged inguinal glands. On percussion the liver dulness extended 6 cm. below the costal margin in the nipple line; dulness was found in each flank and in the lower abdomen with the patient on the back, rising 4 cm. higher toward the navel, as the patient sat erect; over the rest of the abdomen the percussion note was tympanitic.

Genitalia.—The penis showed no scar; there was no edema of the scrotum; no palpable masses were found in the testicles.

Lower Extremities.—These were poorly developed and emaciated, but showed no scars nor irregularities along the tibiæ; there was no swelling of the ankles or feet; the patellar and plantar reflexes were intact and there was no disturbance of sensation.

I. EVIDENCE FOR TUBERCULOSIS

With such a history and status the first thought was of tuberculosis as a cause. The evidence in favor of this explanation was as follows:

1. *The History of Onset.*—A young man previously in good health had a fibrinous pleurisy involving both sides of his chest; this subsided, but a few months later he developed insidiously and without pain an enlargement of his abdomen; such a story certainly created a strong suspicion of tubercular pleura and peritoneum.

2. *The Physical Findings.*—The patient had an ascites; there was no disease of heart or kidneys to account for it; there was no dropsy elsewhere except in both pleural cavities; and coincident fluid in abdomen and pleura has long been looked on as a clinical combination suggesting tuberculosis. Speaking of ascites in the diagnosis of tuberculous peritonitis, Osler says: "A most important point is the simultaneous presence of a pleurisy." The dilated veins in the abdominal wall were interpreted to mean portal obstruction; and this was explained by the supposition of enlarged tubercular glands compressing the vein at the portal fissure. Cirrhosis of the liver as a cause of the ascites and of the portal obstruction was improbable in the light of the previous history and did not explain the coincident pleuritic effusion.

3. *The Temperature.*—The patient was found to have a remittent type of fever, normal each morning, 101 or 101.5 each evening; characteristic of chronic tuberculosis of serous membranes.

II. EVIDENCE AGAINST TUBERCULOSIS

But in spite of these clinical data speaking for tuberculosis, there were other findings that did not fit such an explanation of the case. These were as follows:

1. *The Absence of Tuberculin Reactions.*—The first of these to be tried was the Calmette ocular tuberculin test; it was entirely negative. Later the Moro cutaneous test was employed, likewise without the slightest reaction. The von Pirquet test was not used, because it was realized that even if a reaction was obtained it might be due to sensitization caused by the previous tests. Tuberculin subcutaneously was contraindicated by the patient's daily evening temperature.

2. *The Character of the Ascitic Fluid.*—This was found to be clear, amber yellow, alkaline, specific gravity 1010, with a moderate amount of coagulum on heating; and the centrifugalized sediment showing microscopically a few red blood corpuscles, but no polymorphonuclear leucocytes, no lymphocytes, no cellular masses and no tubercle bacilli. Such a finding was not the one expected in tubercular peritonitis, corresponding rather to a transudate from portal obstruction than to an exudate from chronic inflammation.

3. *The Character of the Pleuritic Fluid.*—This was likewise a clear amber fluid; it showed microscopically many red blood corpuscles, numerous leucocytes with relatively many lymphocytes, a moderate number of endothelial cells, but no tubercle bacilli and no other micro-organisms. A guinea-pig injected intraperitoneally with this fluid and killed after one month showed no lesions of tuberculosis.

4. *The Blood Examination.*—This showed the hemoglobin, 58 per cent.; red corpuscles, 5,064,000; white corpuscles, 13,400; polymorphonuclears 80 per cent.,

large lymphocytes 11 per cent., small lymphocytes 8 per cent., eosinophiles 1 per cent. The normal number of red cells found was attributed to the concentration of the blood caused by the withdrawal of water into the pleural and abdominal cavities; for such a result is common with any large exudate or transudate. The low hemoglobin percentage showed, however, that in reality a considerable anemia was present. The leucocytosis found, though moderate, was the point particularly against tuberculous peritonitis: for in the latter condition the white count is usually either normal or subnormal; and tuberculosis in general does not cause leucocytosis, excepting when a secondary infection has occurred.

5. *The Findings at Exploratory Operation.*—Dock[1] makes a plea for laparotomy rather than paracentesis in ascites. When the cause of the ascites is obscure and other means of diagnosis have failed to determine it, there is no doubt that the plan urged by Dock is a wise one. I have employed it a number of times since Dock's article appeared and always with satisfaction. In this particular case exploratory laparotomy was done by Dr. Stanley Stillman and gave the clue to ultimate diagnosis. It showed no miliary tubercles scattered over parietal or visceral peritoneum, such as one expects to find in tuberculous peritonitis; and no enlarged glands in the mesentery or in the portal fissure; in other words, the findings were not those of tuberculosis. What was found spoke rather for syphilis of the liver as a cause of the ascites—a diagnosis that previously had no evidence whatever to make it worthy of consideration.

III. EVIDENCE FOR SYPHILIS

1. *The Findings at Exploratory Operation.*—The liver was found enlarged, its capsule thickened, its tissue hardened; and scattered through all parts of its substance were numerous nodules varying in size from a pea to a walnut, such as one sees in syphilitic gumma or in malignant disease of the liver. The spleen was visibly and palpably enlarged, its capsule thickened, its substance firmer and harder than normal. No other abnormality of abdominal organs was found on gross inspection.

2. *The Findings on Tissue Examination.*—At the time of operation a portion of the liver substance extending from the superior surface down through a nodule was excised for microscopic examination. The following report was rendered by the pathologist, Dr. William Ophuls, to whom the specimen was submitted:

> Sections show very marked increase in the periportal connective tissue, in some places being so marked as to practically obliterate the liver lobules; there is marked cellular infiltration; one section shows a large caseous area, surrounded by dense fibrous tissue; there are some epithelioid cells but no giant cells; no definite tubercles made out; no tubercle bacilli found. Diagnosis: Syphiloma of liver with marked cirrhosis of liver.

3. *Positive Wassermann Reaction.*—Subsequent to the findings at operation, the Wassermann test was made by Dr. H. R. Oliver. A positive reaction was obtained with blood drawn from the arm, and later was again obtained with the ascitic fluid.

4. *Effects of Treatment.*—As soon as the diagnosis of syphilis seemed fairly established the patient was at once placed on specific treatment, which has been continued ever since. He slowly but gradually improved and is now in better health than he has been for months previous. His pleuritic fluid has entirely disappeared from both sides; and his ascites is so small in amount that it gives him no annoyance and is steadily growing less.

IV. EVIDENCE AGAINST SYPHILIS

1. *Absence of History.*—While but little reliance can be placed on a patient's statements regarding venereal disease, nevertheless the testimony on this point cannot be entirely ignored. This boy not only denied ever having had a sore on his penis, but also ever having had sexual intercourse. Furthermore, carefully questioned, he had no history of the symptoms of early syphilis: no skin eruptions, no sore throat or mouth, no enlarged glands.

2. *Absence of Other Lesions.*—Syphilis of the liver is a late manifestation; before it occurs others have preceded and many of these leave their marks behind them. Over this boy's body there were no enlarged glands found; none of the round, depressed scars over the skin of the legs, so characteristic of destructive syphilitic skin lesions; no irregularities along the crests of the tibiæ; no deformity of the palate or fauces or tongue or nose; and, finally, no scar on the penis.

3. *The Improbability of Syphilis of the Liver.*—In the first place, tertiary syphilis of the liver is comparatively rare and, therefore, not to be accepted as a diagnosis without abundant proof. Keyes[2] quotes Fournier as saying that he found liver syphilis only 9 times among 4,400 tertiary lesions. Rolleston[3] says that in 11,629 autopsies at St. George's Hospital during a period of forty-two years only 37 cases of hepatic gumma were found and 27 cases of hepatic cicatrices. Flexner,[4] in reviewing 5,088 autopsies at the Philadelphia Hospital during thirty-five years, found that hepatic gumma were present in only 23 cases, hepatic cicatrices in 38, and in all there were only 88 cases of hepatic syphilis. In the second place, syphilis of the liver is a late manifestation, one of the so-called tertiary lesions. This means that the primary infection must have occurred at least five years, and more likely ten or even twenty years, before the hepatic manifestation. As this patient was only 18 when he came under observation, the improbability of liver syphilis was manifest and led in the early investigation to the rejection of such a diagnosis.

Nevertheless, in spite of the absence of history, of marks of the disease and of the improbability of syphilis, the findings at the exploratory operation and at the tissue examination, taken in connection with the positive Wassermann reaction, compelled a revision of diagnosis. All of the clinical evidence was against acquired syphilis, yet the pathologist and the laboratory worker found conclusive evidence that syphilis was present; the only possible explanation remaining was that the case was one of late congenital syphilis. A review of the evidence for and against this diagnosis was therefore made.

V. EVIDENCE FOR LATE CONGENITAL SYPHILIS

1. *Frequency of Hepatic Lesions in Congenital Syphilis.*—The liver is found to be affected in a high proportion of cases of congenital syphilis, according to all authorities, contrasting strongly with acquired syphilis, where hepatic lesions are so rare. This is true not only

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[1] Dock: A Plea for Laparotomy Rather than Paracentesis in Ascites, Internat. Clin., ii, Series 17.

[2] Text-Book on Syphilis, p. 469.

[3] Text-Book on Diseases of the Liver, p. 357.

[4] New York Med. Jour., 1902, p. 101.

in infants dying of the disease, but in the cases of late congenital syphilis, occurring anywhere in the first, second or third decades of life. In 1902 Forbes[5] collected 132 cases showing the lesions of late congenital syphilis in one form or another, and in 34 per cent. of these the liver was affected.

2. *The Clinical Findings.*—The clinical features described as occurring in late congenital syphilis of the liver are those found in this case—enlargement of liver and spleen, with ascites as a very common manifestation.

3. *The Mother's Condition.*—After a diagnosis of late congenital syphilis had been reached, it seemed wise to investigate the surviving parent for proof as to whether the disease existed there. A test of the mother's blood by means of the Wassermann technic was, therefore, made for us by Dr. H. R. Oliver and the blood showed a positive reaction.

VI. EVIDENCE AGAINST LATE CONGENITAL SYPHILIS

In the face of all the facts so far presented the diagnosis seems fairly certain; and yet there are missing links in the chain of evidence, whose absence cannot be overlooked.

1. *Absence of Stigmata.*—These are the so-called stigmata of congenital syphilis, such as the Hutchinson's teeth; interstitial keratitis or its scars; deafness; bone deformities, such as asymmetry of the skull, saddle nose, saber tibia; and constitutional marks, such as physical and mental backwardness of development, amounting to infantilism or even idiocy. Not one of these stigmata could be found present in this case. The absence of these is at least very unusual and cannot fail to cast doubt on the situation.

There is, however, one remaining possibility not yet mentioned—an early acquired syphilis—acquired by some other than the venereal route. On this point of stigmata Rolleston says:

> In order to be sure that the case is one of delayed congenital syphilis there must be some other evidence of congenital syphilis, such as interstitial keratitis, otherwise the disease might have been acquired in early life; for example, from a wet nurse.

And again in another place he says:

> The diagnosis rests on the evidence of congenital syphilis, as shown by interstitial keratitis, Hutchinson's teeth, deafness and infantilism, together with hepatic enlargement. If evidence of syphilis common to the congenital and the acquired forms, such as gummata are present and none of the stigmata of the congenital variety are obvious, the infection may have been acquired in early life.

Finally, no explanation of this case so far offered accounts for the double pleuritic effusion, which is not a common feature either of late congenital syphilis or of tertiary acquired syphilis. The only supposition possible seems to be that of a coincident gummatous condition existing in both pulmonary bases as well as in the liver, perhaps having gained access by extension through the diaphragm. But this must remain a theory until such time as the last chapter in our fascinating problem lies open before us—a chapter which as clinicians we are bound to postpone as long as we possibly can.

Shreve Building.

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5. St. Bartholomew: Hosp. Rep., xxxviii, 37.

FATAL LEAD POISONING FROM THE USE OF BUROW'S SOLUTION

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NEW YORK

Several years ago the following case of lead poisoning with fatal termination occurred in one of my hospital services. For obvious reasons its publication has been delayed.

History.—A young man was admitted to hospital suffering from an electric burn received a month before. A cold chisel had fallen out of his hand onto the third rail of the electric railway where he was working, and the resulting flash had burned both hands and his face, neck and the upper chest (it being summer his shirt was open), but had not set his clothing on fire. There was moderately extensive burn of the face, neck and chest, much of it eroded and with some necrotic areas. His left hand showed on the dorsum merely a large raw area; but the right, in addition to the second degree burn that covered most of the surface, showed beginning necrosis of the last phalanx of the thumb and of the tips of the middle and index fingers; and the extensor ossis metacarpi pollicis was exposed, as also was one tendon on the anterior surface of the forearm. In spite of his severe lesions, the patient's general condition was not bad; the temperature rose only a degree in the evening, the kidney functions were perfect, the gastrointestinal tract was in good condition and the appetite was good. The chest and abdomen were negative. The erythema of the more lightly burned areas was passing off; granulation was beginning; but there were still some necrotic masses. He had been under medical care, but it was impossible to ascertain what had been used, save that it was a moist dressing.

Treatment of the Burns.—Of general treatment the patient required hardly anything; the local treatment given was wet dressings of Burow's solution of the usual formula (a mixture of aluminum acetate and lead sulphate), 1 to 8 parts of distilled water. The lesions did exceedingly well; the sloughs were cast off, granulation progressed, the exposed tendons began to be covered, and a line of demarcation appeared and deepened behind the necrosed finger tips.

Result.—The man's general condition, however, became unsatisfactory. After being some three weeks in the hospital constipation set in; the record shows almost daily administration of calomel, rhubarb and soda, etc. In the fourth week he began to complain of pain in the stomach, and examination revealed a point of epigastric tenderness; he vomited once or twice, voiding stomach contents only; his tongue was coated and his breath was foul. A gastric ulcer was suspected; but examination by the internist on duty revealed no positive evidence of it. One week later, the epigastric pain and vomiting having continued, and moderate emaciation having set in, the presence of slight tremor of the hands and a faint but appreciable blue line on the gums enabled the diagnosis of lead poisoning to be made.

Treatment of the Lead Poisoning.—The use of the Burow's solution was immediately stopped and replaced by 10 per cent. balsam of Peru in oil. Steady improvement in the local conditions continued; but the lead intoxication increased, in spite of all that could be done. Purgatives, magnesium sulphate, potassic iodid, and varied measures to promote the elimination of the poisonous metal and to sustain the patient's resistance did indeed relieve the epigastric pain and the vomiting, but the man's condition in general became steadily worse. Weakness became more marked; wrist drop appeared; and the patient became delirious at intervals. In the seventh week after his admission to the hospital he was continuously delirious, being so violent that he had to be restrained; ecchymoses appeared on backs of the hands and arms, and on the legs, and the tremors of the limbs, tongue, etc., became very marked. He died at the beginning of the eighth week.

Undoubtedly systemic lead poisoning occurred from absorption by the granulating wound surfaces. Though wet compresses of the dilute Burow's solution were used on the face, none were used around the mouth, as the lips had not been burnt; and, the hands being in an impervious (rubber tissue) outer dressing, the patient was fed, and there was little chance of any direct introduction of the metal as a contamination of the food. Besides, the intensity and severity of the intoxication is proof that the metal must have been introduced and absorbed in comparatively large quantities in a short time.

The entire time of application of the lead solution was five weeks. Symptoms of plumbism appeared at three weeks; they were severe by the fifth week; and the patient succumbed in the eighth week. It is not reasonable to suppose that the accidental absorption through the gastrointestinal tract of small quantities of the lead solution could be responsible for so acute and profound intoxication.

Examination of the ward solution used for the dressings when suspicion was directed to it showed a fairly abundant snow white deposit on the bottom of the jar, with a clear supernatant fluid. It was applied, according to the druggist's directions, after being well shaken. Investigation of the various formulas for the preparation of Burow's solution showed that they differed regarding the filtration of the mixture. Some direct this to be done, only the clear filtrate being used; while others omit it, saying the mixture is to be well shaken before application.

Lead salts in solution or suspension are generally recommended in many dermatoses, the supposition being that absorption does not occur, at all events when the epidermis is intact. Lewin[1] found that even the frequent, persistent and extensive use of a 10 per cent. lead acetate spray could not force the metal through the skin; though he did note absorption when there was inflammation or destruction of the corneous layer. Practically all authorities, from Cazenave and Schedel, in 1862, to Audry, Durand, and Nicolas, in 1909, recommend lead salts in solution, ointment, or plaster for various dermatoses, including inflammations and infections, and without any mention of danger of absorption. Nor is its use confined to affections in which the corneous layer is preserved. Crocker[2] uses subacetate of lead lotions in excoriations, and Paschkis[3] recommends lead water for erosions and ulcerations of all kinds, stating that when the epidermis has been destroyed the lead combines with the exudation and forms a protecting cover.

Furthermore, lead applications are advised in burns by many surgical and dermatologic authorities, and usually without any special reference to danger. Gross[4] and Wyeth[5] recommend ordinary white lead paint; Wood[6] uses carbonate of lead in linseed oil or as an ointment; Veiel[7] and Bum[8] employ lead lotions, and von Notthaft[9] and Theimenn[10] use lead water. Witherstine,[11] Ringer[12] and Wood,[6] while recommending the treatment, do refer to the possibilities of absorption if employed on large surfaces.

Liquor aluminii acetici crudus or Burow's solution, diluted, is so universally employed, especially in Germany, for the treatment of burn that quotation of authorities is unnecessary. There is, however, a radical difference in the formulas recommended, so that the preparation may be a clear solution of aluminum acetate or a turbid fluid containing an abundant precipitate of sulphate of lead.

Liquor aluminii acetici crudus, Burow's solution,[13] is made as follows: 95 parts of potassic alum are dissolved in 700 parts of distilled water, to which, when cooled, is added 151 parts of powdered "raw" lead acetate. This is filtered; 100 parts of the clear fluid contain 5 parts of *aluminium acetate, with a little potassic acetate.* No lead or other heavy metal is in the filtrate, as shown by the absence of precipitation on passing sulphuretted hydrogen through the fluid.[14] This is the formula of a number of authors; and von Notthaft[15] refers to liquor alumini acetici as a clear, colorless fluid containing from 7.5 to 8 per cent. of basic aluminum acetate without either precipitated lead sulphate or any excess of soluble lead acetate.

Nevertheless this same writer,[15] in giving the formula of Burow's solution, directs that 5 parts of crude alum and 25 parts of basic acetate of lead are to be dissolved in 500 parts of water, and then, saying nothing of filtration or decantation, adds the direction, "to be well shaken before using." This is proof positive that the precipitate is to be used. In this he is followed by a number of authorities, of whom I need mention only two as typical. Lang[16] expressly prefers von Notthaft's formula, using the freshly prepared solution as a wet dressing. Luithlen[17] rejects the new, i. e., filtration, methods for the preparation of Burow's solution, and states explicitly, "and the preparation is best used unfiltered, being well shaken before it is employed." Inquiry as to the practice in the medical institutions of this city reveals a similar difference. In some of them Burow's solution is always decanted or filtered or both before use; in others, including some of the largest, the sediment is carefully preserved as part of the lotion. The sediment, of course, is practically pure sulphate of lead.

In spite of the extensive use of lead in various forms as an external application, serious plumbism from this source seems to be very rare; hardly any cases reported. I have been able to find but two. J. O'Carroll[18] reports a fatal case from the use of a hair dye containing lead. Pässler[19] saw the use of diachylon ointment in an eczematous infant cause a violent attack of lead poisoning, with a hemorrhagic nephritis, but ending in recovery. Idiosyncrasy is evidently a factor of prime importance in these cases; and very probably milder and unreported cases of lead poisoning through the integument are not so rare. Since the occurrence of the case here reported I no longer use Burow's solution, filtered or unfiltered, for cases of burn. The results in the cases suited for wet dressings are just as good with boric acid solution.

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[1] Ueber das Resorptionsvermogen der Haut, insbesondern für Bleiverbindungen, Deutsch. med. Ztschr., 1883.

[2] Diseases of the Skin, 1893.

[3] Encyklopedie der Haut- und Geschlechts Krankheiten, Lesser, p. 18.

[4] Manual of the Practice of Surgery, Bryant, 1881, p. 129.

[5] Text-Book on Surgery, 1881, p. 91.

[6] Treatise on Therapeutics, 1880, p. 40.

[7] Handbuch der Hautkrankheiten, Ziemssen, 1883, p. 345.

[8] Therapeutisches Lexicon, 1891, p. 1665.

[9] Taschenbuch, 1903, p. 77.

[10] Therapie der Haut- und Geschlechts Krankheiten, 1901, p. 155.

[11] Annual Cyclopedia of Practical Medicine, Sajous, 1899, p. 367.

[12] Handbook of Therapeutics, 1880, p. 234.

[13] The latest German Pharmacopeia does not use lead acetate in the preparation of liquor alumini acetate; but the older formula is the one still in common use here.

[14] Hager: Handbuch der Pharmaceutischen Praxis, 1903.

[15] Taschenbuch, 1903, pp. 137, 168.

[16] Therap. für venerische u. Hautkranke, 1899, p. 108.

[17] Therap. der Hautkrankheiten, 1902, p. 16.

[18] Dublin Jour. Med. Sc., January, 1904.

[19] München. med. Wchnschr., 1894, p. 389.

THE TREATMENT OF EMPYEMA, PLEURITIC EFFUSION AND HYDROCELE WITH SODIUM BIBORATE SOLUTION

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So much has been said recently about the treatment of empyema and pleurisy with effusion that I venture to give a method which I first employed in 1883 and have since used, whenever opportunity offered, with complete success in pleuritic effusion, empyema and hydrocele.

History.—The first case in which I used the treatment was that of C. S., a boy about 10 years old, who became ill with pleurisy, followed by an effusion filling the right side of the chest. I deferred withdrawing the fluid as long as I could and empyema followed. I then aspirated, withdrawing about a pint and a half of creamy pus, but the chest soon filled up again, and again I aspirated, withdrawing nearly the same amount of pus. This was repeated seven times and the amount of pus withdrawn was about the same each time. I had been experimenting with a solution of biborate of soda in patients with hydrocele, and as that had checked the effusion in each instance I concluded to try it in this patient. After withdrawing the pus I injected about a pint of a 2 per cent. solution of biborate of soda at a temperature of 100, allowing the solution to remain in the cavity for about ten minutes, moving the patient gently so as to bring the solution in contact with every part of the cavity. I then withdrew all the solution, and that was the end of the empyema, for the patient made a rapid recovery.

My next patient had simple pleurisy with effusion. I aspirated but did not wash the cavity out with the biborate solution, as these patients often recover after aspiration; but the chest soon filled up again and I aspirated again, this time washing out the cavity with the biborate solution. This ended the trouble.

My next patient was a man of about 70 with hydrocele. The effusion had been aspirated three times, and the sac had refilled each time. I aspirated, and washed out the sac with the biborate solution, left it in about fifteen minutes, then withdrew it, strapped the scrotum, and sent the patient home. Although he lived for ten years after that he never had a recurrence.

Since that time I have used the biborate solution in nearly every case, and always with success. One great point in its favor is the fact that it is quite painless, and any one who has seen a patient writhe under an injection of iodin or carbolic acid will appreciate this.

Therapeutics

WHOOPING COUGH

Although whooping cough, or pertussis, has long been recognized as one of the most conspicuous examples of an infectious disease, and that it is also directly contagious, still, the agent of the infection has not been definitely determined. Some have believed that it was a protozoon, to which class belong the plasmodium, the infecting agent of the malarial diseases. Others have found a bacillus resembling the bacillus of influenza, which they believe is the cause of whooping cough. At present the opinion of the majority of those who have personally investigated the subject seems to be in favor of accepting this bacillus as the cause of the infection.

As the disease is exceedingly contagious, and its complications and sequelæ (pneumonia, phthisis, heart strain, cerebral hemorrhage, ocular hemorrhage) are often exceedingly dangerous, it is not at all necessary to present any argument in favor of the isolation of those who are suffering with it. This isolation should be put into effect as soon as the disease is recognized. But it commences so insidiously, its early symptoms are usually so closely identical with those of an ordinary "cold" commencing "in the head" or nose, and affecting later the bronchi, and causing a cough, and the characteristic whoop is so late in appearing, that two or three weeks often elapse before a positive diagnosis is made. Here the scientific precision of the laboratory comes most usefully to the aid of the physician, for it has been found that in whooping cough, even early in the disease, there is a pronounced leucocytosis. If, when the symptoms seem to point to the possible presence of whooping cough, a pronounced leucocytosis is found, it is strong confirmatory evidence that that disease is actually present. But if, on the other hand, there is no leucocytosis, it is probable that it is not the early stage of that disease.

The necessity of giving children with the disease abundance of fresh air is now generally recognized. This rule, however, has not always been carried into effect with as much common sense as is desirable. By many persons the direction by the physician to give the patient plenty of fresh air is interpreted as a command to expose him to out-of-door air without regard to its temperature or the direction and force of the wind. It is hardly necessary to present any argument to the practitioner of experience that the exposure of any individual to air of extremely low temperature or to cold winds and drafts is exceedingly likely to be followed by inflammatory affections of the respiratory organs. Much more are such unfortunate results likely to follow, and their incidence likely to be more severe, when the victim of the exposure is already suffering from whooping cough. If the patient comes under treatment in the summer he may be kept out of doors most of the time, if he is not severely affected by the disease. This does not mean that he should be allowed to play hard and become overheated or exhausted. In mild spring and autumn weather, quiet enjoyment of outdoor air is advisable, but in winter when the temperature is low, and especially if damp, and when there are cold winds, it should be emphasized that exposure during whooping cough is dangerous. But not all patients can be allowed to go out of doors. If there is fever, or if the paroxysms are severe or frequent, rest in bed is essential, or in warm weather rest on a veranda. If in the intervals between the paroxysms the child shows signs of being sick, his temperature should be accurately taken, and if it is 100 F. or over he should be kept in bed until it returns to normal.

Food should be of an easily digestible character and given at regular intervals. If vomiting is of frequent occurrence, the food should be given in small quantities, and at more frequent intervals, which should usually be three hours.

Concerning medicinal treatment, opinion and practice vary greatly. Most of the drugs which have been extensively used may be classed as antiseptics or antispasmodics, and either of these classes is favored in proportion as the individual practitioner is inclined to consider the infection or the spasmodic element as furnishing in the first case a more rational, or in the second case a more imperative indication for treatment.

Forty years ago Binz claimed that sulphate of quinin was a specific in whooping cough if given in solution so as to come in contact with the mucous membrane of the mouth and throat, believing that in this way it destroyed the micro-organisms which caused the disease.

The antispasmodics which have been used with the idea that the neurotic element of the disease was the most important, and could be most satisfactorily influenced by treatment, are too numerous to permit even of their enumeration.

Many years ago French clinicians advised the administration of belladonna, but it has never come into very general use. Its best effects are seen only when it is pushed until its physiologic effects are apparent, and these are so disagreeable, not to say terrifying, that most persons would rather endure, or have their children endure, the paroxysms of the disease than the dryness of the throat, the hyperemia of the skin, the impairment of vision, and the cerebral disturbances which are likely to follow the use of large doses of belladonna.

The bromids have been recommended, but rarely are the phenomena of whooping cough of so purely reflex character that these salts alone prove of much avail, although they may be useful in quieting the general restlessness and nervousness sometimes seen in these patients.

Antipyrin has been highly praised and extensively used, and assists greatly in palliating the paroxysms, but many hesitate to use, in a disease which lasts usually for several weeks, a drug which has been reputed to have very deleterious effects on the blood and the heart. If properly used, however, antipyrin is one of the most successful treatments in whooping cough. It should be given in 0.05 gram (5/6 of a grain) doses for every year and a half of age of the child, i. e., 0.05 gram for a child up to one and one-half years of age; 0.10 gram for one and one-half to three years of age; 0.15 gram from three to four and one-half years; 0.20 gram (3 grains) from four and one-half to six years of age, and so on, and this dose administered three or four times in twenty-four hours. The little patient should be given coincidently one drop of the tincture of digitalis three times a day for every one and one-half years of age. The antipyrin may be prescribed as follows:

℞.	gm. or c.c.		
Antipyrini	3		gr. xv
Syrupi	50	or	fl.℥iss
Aquæ menthæ piperitæ, ad	100		ad, fl.℥iii

M. et Sig.: A teaspoonful, in water, three or four times a day.

[This would be the dose of antipyrin for a child from three to four and one-half years of age.]

The digitalis should be ordered separately, so that its dose may be increased or diminished according to the rate of the pulse. The digitalis not only prevents the antipyrin from having any weakening action on the heart, but also helps the heart to withstand the strain on it from the cough.

Whatever the treatment may be, its success may be determined by the frequency of the paroxysms of coughing, and the mother or nurse should keep a careful record of these day by day, so that the record of yesterday may be compared with that of to-day, and the medicine increased, diminished or continued according to the results.

If there is much bronchitis, it may be necessary to give an ammonium chlorid expectorant mixture, with or without opium in some form. Also, if the child is very weak, it may be necessary to reduce the intensity and frequency of the paroxysms by some form of opium. With the rest and antipyrin treatment, however, it is rarely necessary. The best form in which to administer opium to a young child is small doses of codein sulphate or the tincture of deodorated opium. The latter should be ordered separately, and a drop administered to a child two years old or more, every two, three or four hours, depending on its action. If the child is drowsy, the mother or nurse should be told to stop its administration.

After the paroxysms have practically ceased, some form of tonic is needed, and perhaps nothing is better than an *eisenzucker* (saccharated oxid of iron), three-grain tablet, three times a day, or syrup of hypophosphites may be ordered, or cod-liver oil in small doses may be administered, or some emulsion of fats or cod-liver oil. Be the tonic treatment what it may, it should be persisted in, with plenty of outdoor air and perhaps change of climate, until the child has ceased to cough, has regained its weight, and has recovered or attained a normal healthy color; in other words, until its general condition and blood condition are all that could be desired. Until the child has reached this condition of health there is danger of tuberculosis becoming a sequel of the whooping cough.

Some practitioners think that the cough is less intense, the vomiting less frequent, and the general condition of the patient improved by either an elastic band worn about the abdomen, or adhesive straps, or a firmly applied abdominal bandage. Such mechanical measures can certainly do no harm, and may often do good.

The administration of chloroform to do necessary operations on children who have had whooping cough has in many instances seemed to abort the disease. It has, therefore, been suggested that chloroform be administered once or twice early in the disease to see if it would kill or prevent the growth of the whooping cough germ. Not sufficient statistics have yet been offered to show its value, however, and its use for this purpose is, therefore, purely experimental.

The old treatment of taking children with whooping cough to the gasometers for the purpose of subjecting them to the inhalation of coal gas fumes is now probably rarely tried. If the inhalation of this kind of coal gas was valuable in killing the disease, the toxic gases occurring in the new methods of making illuminating gas would seem to render the subjection of a child to these gases very inadvisable.

The various antiseptic sprays recommended do not seem to reach the seat of the disease or to do very much good, and probably boric acid sprays and boric acid gargles are as antiseptic and as safe and cleansing as any local treatment that could be safely advised.

The treatment of whooping cough may be summed up as:

1. Rest.
2. Fresh air.
3. Food every three hours in not too large quantities. (If a meal is lost by a paroxysm and vomiting, the child should be given another meal immediately, as it is likely another paroxysm will not quickly occur.)
4. Warm baths.
5. Boric acid mouth wash and gargle.
6. The bowels should be moved daily with cascara, if needed.
7. Iron in some pleasant form.
8. Antipyrin, if the paroxysms are at all severe, in the dose above described, and with the coincident administration of tincture digitalis.
9. If antipyrin is inadvisable or not successful, codein or tincture of deodorated opium should be given.
10. Later tonics, food, and hygiene best suited to each individual patient.

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[*For other information see second page following reading matter*]

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THE AMERICAN MEDICAL ASSOCIATION—ITS POLICIES AND ITS WORK

IV. THE REORGANIZATION OF THE STATE AND COUNTY SOCIETIES

BEFORE REORGANIZATION

Two weeks ago we called attention to the necessities and results of organization, so far as the American Medical Association was concerned. Much that was said then will also apply to the state societies. Previous to 1901 they were practically isolated organizations, with little actual connection between them and the local societies. In some instances their relation to the American Medical Association was not even nominal, and in no case was it close and vital. They were entitled to send delegates to the American Medical Association, but the smallest local body had the same right. There was no uniformity as to plan of organization or requirements for membership.

The state society was in no sense representative, and it usually comprised but a minor fraction of the physicians of the state. The annual meetings were merely voluntary gatherings of men for scientific and social purposes; and anything outside of scientific work was seldom attempted. Little time was given to the discussion of business or to constructive work, unless the passing of resolutions might be so regarded. Little, if any, effort was made to build up local societies, and so far as accomplishing anything during the interval between the annual meetings was concerned, for all practical purposes there might as well have been no state society. In other words, the state societies before reorganization, with four or five exceptions,[1] were simply independent bodies, with no close or uniform relationship to each other,[2] meeting annually for scientific purposes, and in no way so constituted as to represent the profession of the whole state, or to do constructive work.

The conditions regarding local societies were as bad, if not worse. Previous to reorganization, there were few, if any, strictly "county" societies, except in a few states.[1] Local organizations were to be found only in the larger towns. District societies had no definite territory and were voluntary organizations, usually meeting but once a year. The membership of the local bodies generally comprised an extremely small fraction of the physicians in the locality, and often was limited to friends of certain individuals, to the staffs of certain hospitals, or to members of the faculty of a certain college; often rival societies were organized by rival cliques and circles in the same town; in a few instances these were actually detrimental—breeders of jealousy and strife, and tending more to disorganization than to organization.[3] They were, in short, isolated units with nothing in common, and had slight connection with the state society.

Most important of all was the fact that the existing local societies did not afford opportunity for membership to physicians in small towns or rural districts. Consequently, such men were practically barred from attendance at medical societies, except at great sacrifice of time and money, such as the majority were neither able nor willing to make. The results of these conditions were that thousands of physicians were beyond the reach of medical societies, while many thousands more did not hold membership because the existing societies did not appeal to them.

Such, in brief, were the general conditions prevailing, previous to 1901. These unsatisfactory conditions had long been realized by progressive members of the profession and, as shown by the annual transactions of many state societies, had been frequently discussed and numerous suggestions made for their betterment. Thus when—in 1901—the American Medical Association proposed a definite and uniform plan of organization, the time was ripe for action, and the opportunity was immediately grasped. Several of the state societies did not even wait for the adoption of the report by the American Medical Association, but actually modified their organic laws to conform to the proposed plan, while it was still a tentative one. Following the adoption of the report, a large number of state societies undertook the work of reorganization. So eagerly was the plan taken up, that in 1902 requests were made that a model constitution for state organizations be prepared so that all could conform to a uniform plan. The next year a similar request was made for a model constitution for county societies, and this also was ordered prepared.

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[1] The statements made in this editorial must be regarded as a general summary of the conditions of the country as a whole. Exceptions must be made as to certain states. For instance, Massachusetts had for a long time been organized on a very effective and practical "district" plan. Alabama, in the early seventies, adopted an excellent scheme of organization which, in fact, was the ideal before the committee in working up the proposed plan. The Medical Society of the State of New York and the New York State Medical Association each had a county society system, but the existence of these two rival bodies largely counteracted the good results which might have been secured. Besides these, Connecticut, Indiana, New Jersey and Pennsylvania were organized on some variation of the county plan.

[2] Said the Committee on Reorganization in their report in 1901: "It is not necessary to use arguments to prove that there is at present no close relationship among the state societies; that each is acting as an independent body, recognizing no other; that no concert of action among them regarding measures that are of mutual importance is possible under present circumstances, and that a federation of the state societies is desirable and absolutely necessary for the accomplishment of their full measure of usefulness."

[3] "One of the great obstacles to systematic organization is the large number of existing medical societies. Of these there are between 1,300 and 1,400, although with new ones continually starting and with many in that condition of innocuous desuetude which makes it hard to decide whether they are alive or dead, it is impossible to even pretend to any correctness as to the number. For the reason that most of these are organized without any common plan and without relationship one to the other, they are a source of weakness and an obstacle to systematic organization." From the Report of the Committee on Reorganization, 1901.

REORGANIZATION

And what, after all, were the changes which have produced such marvelous results in so short a time? Like those made in the American Medical Association, they were apparently very slight and yet so fundamental as practically to revolutionize existing conditions and to make possible a systematic, practical organization of the profession.

The first and basic principle of reorganization was the recognition of the importance of the local or county society. It was realized that only through it could the individual physician be reached. "Such societies would furnish to every physician the opportunity of membership with the professional, social and material stimulus and betterment incident thereto." So the local society was made the unit or foundation of the whole superstructure. This unit also was made to cover a definite area—a county. The county society was made the "portal of entry" to all above it. To be a member of, or to retain membership in, the state or national associations, one must be a member of this unit—his county society. Before the reorganization, a physician might be a member of either the state or the national body, and yet not be a member of any subordinate society.

The second principle relates to representation. A state legislative or business body was created—the House of Delegates—in which are federated the county societies and to which each county society is entitled to send delegates, in proportion to its membership. These delegates are the representatives of their society; before reorganization, those who attended the state society represented themselves only. As was shown in the preceding editorial, the reorganization restricted to the state societies the right to send delegates to the American Medical Association; here that right of representation in the national body is restored.

Thus the reorganization means that the individual physicians of a county form the county society; that the county societies, through a delegate system, are federated in and form the House of Delegates of the state association; that the state associations, through a delegate system, are federated in and form the House of Delegates of the American Medical Association.

The third principle is that membership in the county society carries with it membership in the state society. This means the right to attend the annual meetings and to take part in the scientific work and in the social functions; it does not mean the right to vote or to take part in the legislative or business affairs. This right belongs to those selected for that purpose by the county societies—the delegates.

The above, in brief, are the general principles of the plan of organization of the profession adopted in 1901—the plan which now exists in every state and territory except one. Let it be emphasized that this plan was not originated in 1901; it had been suggested and discussed long before that time.[4]

RESULTS

What are the results? The first and most noticeable has been the increase in membership. The prediction that the change would result in enormous increase in membership in county, state and national bodies has been realized. It is impossible to show by actual figures the increase in membership, since, in 1901, there was no way of ascertaining even the names of existing societies, much less the membership. The same applies, to a certain extent, to the increase in membership in state societies. Some idea can be obtained, however, from the report of the general secretary made to the House of Delegates in 1901, in which the increase for ten years is shown. In 1899, for instance, the Illinois State Medical Society had a total nominal membership of a little over 500, but, according to the *Transactions,* only approximately 300 members paid dues for that year. At present, this society has an actual membership of about 5,300. The State Medical Association of Texas in 1899 had a membership of 297; to-day it has over 3,100. Previous to reorganization, there were estimated to be between 1,100 and 1,200 local societies, largely confined to the more populous areas, uncorrelated, disorganized, overlapping in territory, and often conflicting in purpose and object. Now there are 2,287 county societies, uniform in organization, each having jurisdiction over its own allotted territory, united for mutual improvement and helpfulness and gaining each year in strength and influence. The total membership of these societies is a little over 70,000. To-day a medical society is within the reach of practically every physician in the country.

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[4] The following from the report of the Committee on Organization, of which Dr. N. S. Davis was chairman, is interesting in this connection: "By making membership in a local [county] society a necessary qualification for membership in the state and national societies, the strongest possible inducement is presented for organizing and maintaining these primary and essential bodies by all intelligent members of the profession. By providing for delegates from the local and state societies on a uniform ratio of representation, and placing the whole business management of the Association in the hands of such delegates by restricting to them the right of voting, the most reliable check is put upon the tendency to centralization or local control, or any form of class supremacy, while the door to permanent membership is opened to all who are willing to support the interests of the profession in their own districts." (See THE JOURNAL A. M. A., June 25, 1887.)

The establishment of the councilor system, providing for a board of trustees or directors, and the appointment of numerous standing and special committees, have made the state society an organization in continuous existence, ready at any time to take up matters of interest to the profession and to the public, instead of being simply an annual mass-meeting, practically non-existent during the interval. The work now being done by committees of state associations, such as those on medical legislation, public health, medical and public education, and on other important matters, would have been utterly impossible under the old conditions. The affiliation of all county societies with the state society has made possible the appointment of committees containing representatives from each county society, thus giving the county societies a part in the work of state associations, and an opportunity to cooperate with each other.

Some one has observed that every proposition is ultimately one of finance. Medical organization is no exception. The enlarged membership has made for financial strength. Under the old order the state society dues varied from $2.00 to $5.00, but a comparatively few contributed, the dues being paid chiefly by those who were able to attend the annual meetings. Now each contributes a smaller amount, but from the many this makes a larger total income—and the enlarged possibilities for work and usefulness due to increased income are obvious.

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THE ANTIVIVISECTION AGITATION IN NEW YORK

Again this year an antivivisection bill has been introduced into the New York legislature, and, after a hearing, the committee of the assembly has again refused a favorable report. Eager to obtain some sort of advantage, however, the agitators for legislation have just succeeded in presenting a second bill, providing for a commission to investigate "into the practice of vivisection or experimentation on living animals and the amount of suffering involved therein." The bill authorizes the commission to send for persons or papers, to administer oaths, and to examine witnesses and papers regarding the subject. The proposed commission would consist of seven persons, two physicians or scientific men, two active members of "an organization for the prevention of cruelty in vivisection," two practicing lawyers, and a seventh member appointed at large. A sum of $5,000 is provided for expenses.

The agitation in New York is mainly due to the activity of one newspaper. The New York *Herald*, stung by the success of the county medical society in forcing from its columns advertising matter subversive of public health and morality, retaliated by taking sides with the opponents of medical research. In an apparently malicious spirit the paper has published day after day most misleading accounts of laboratory procedures, topped by large headlines referring to the "tortures," the "torments," the "prolonged agonies," suffered by experimental animals. The falsity of these statements and inferences has been repeatedly made clear in public letters, but the appeal to prejudice and suspicion has not been checked. As a result a state of extreme feeling has been aroused in some worthy persons, a condition remarkably like that in Great Britain in 1875, when the first Royal Commission on Vivisection was appointed.

That commission thoroughly investigated the conditions in the laboratories, found no material abuses, and on reporting made certain recommendations. As a writer in *Nature* put it at the time, "The evidence on the strength of which legislation was recommended went beyond the facts, the report went beyond the evidence, the recommendations beyond the report, and the bill can hardly be said to have gone beyond the recommendations, but rather to have contradicted them." It was a drastic bill passed in the heat of the agitation. For thirty-four years this law has been enforced, seriously interfering with medical research in Great Britain. What has been the effect? Antivivisection societies have multiplied—fifteen societies in Great Britain are energetically striving for the absolute abolition of animal experimentation. In 1906 these societies obtained the appointment of another commission; the voluminous testimony before it proved overwhelmingly how baseless were the insinuations of the agitators!

The Council on Defense of Medical Research has made a careful investigation of all American medical schools and laboratories in which animal experimentation is carried on, and has obtained detailed reports. The investigation has shown that every care is taken to avoid the infliction of pain. Practically all of the laboratories engaged in active research have voluntarily adopted regulations which state the conditions and express the spirit in which animals are used for experimentation. The responsibility to public interest in the importance of the problems studied and in the propriety of the methods used in studying them is placed by these regulations definitely on the person most concerned and most trustworthy, the person most likely to know at all times what is being done—the director of the laboratory. Any procedure involving greater distress than that accompanying anesthetization can be used only with the director's sanction. In several instances such regulations have been enforced for many years.

As the British experience indicates, the discovery of satisfactory conditions in the medical laboratories will have no effect in allaying the antivivisection agitation, for, quite apart from the fanatical element in the movement, there is money, which, bequeathed to antivivisection societies, must be used. In response to the present excitement, New York may, indeed, spend $5,000 of public funds for an investigation. That investigation, however, has already been made by a Council of this Association, and reliable safeguards against the careless use of animals are already in existence. The immediate situation, therefore, is one which, if the bill passes, the medical profession may face with equanimity.

Cause for anxiety, however, may later arise, if, as in Great Britain, clamor forces legislation hostile to the laboratories. For the sake of public health the medical profession should urge that medical research be controlled within professional lines, and not by hampering and entangling conditions expressed in short-sighted legislation.

THE EFFECTS OF ALCOHOL AND CHANGES IN TEMPERATURE ON ANTIBODY FORMATION

When it was shown experimentally that the natural resistance of animals to infection with various bacteria may be influenced by hunger, thirst, overexertion, abnormal heat and cold, poisons and a number of other factors, the question quickly arose as to just how modifications of resistance are produced. At first this question was approached from different and for a time mutually exclusive points of view, namely, that provided by the phagocytic and that provided by the humoral theories of antibacterial immunity. At first the advantage seemed to be with the phagocytic theory because it dealt with dynamic reactions, whereas the humoral theory was concerned with substances that then were looked on as altogether preformed and more or less stationary. However, when it became apparent that the antibodies of the humoral theory were subject not only to fluctuation, but also to new formation under the stimulus of infecting agents and in consequence of cellular reactions, the question whether means that modify resistance have any influence on the course of formation of antibodies soon suggested itself. A number of investigations have been carried out with this thought in mind to determine the effect of various factors on antibody formation.

According to Trommsdorff,[1] severe physical exhaustion, prolonged hunger, and great chilling of the body, as well as certain other factors that are known to lower resistance, all lessen the production of antibodies in immunized animals. With respect to the effects of alcohol in rabbits, the results of Müller,[2] Wirgin[3] and others indicate that alcohol in mildly intoxicating quantities for several days after the injection of the antigen restrains the formation of antibodies. Wirgin found about 5,300. The State Medical Association of Texas in 1899 had a membership of 297; to-day it has over 3,100. Previous to reorganization, there were estimated to be between 1,100 and 1,200 local societies, largely confined to the more populous areas, uncorrelated, disorganized, overlapping in territory, and often conflicting in purpose and object. Now there are 2,287 county societies, uniform in organization, each having jurisdiction over its own allotted territory, united for mutual improvement and helpfulness and gaining each year in strength and influence. The total membership of these societies is a little over 70,000. To-day a medical society is within the reach of practically every physician in the country.

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[1] Arch. f. Hyg., 1908, lviii, 1.
[2] Arch. f. Hyg., 1904, li, 368.
[3] Centralbl. f. Bakt., 1905, I, xxxviii, 200.

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for nearly a year, reports great improvement.——Dr. William A. Crooks, for eleven years assistant superintendent at Watertown State Hospital, was appointed superintendent by the State Board of Administration, March 21, vice Dr. Warren E. Taylor, resigned.

Chicago

Relief of Consumptives.—The Young Woman's Auxiliary of the Jewish Consumptive Relief Society netted $3,000 for the work in an entertainment given at Mount Sinai Temple, March 13.

Red Cross Endowment Committee.—The president has made the following Chicago appointments to the membership of the endowment committee of the American Red Cross: Cyrus Hall McCormick, John V. Farwell, Edward B. Butler, W. G. Shedd, Charles G. Dawes and John J. Mitchell.

Children's Isolation Hospital.—Dr. Anna Dwyer proposes to erect a hospital for the treatment of contagious diseases of children, to be paid for by the money donated by school children of the city, and suggests the erection of the building on land adjoining the Mary Thompson Hospital.

Unlicensed Practitioners Fined.—Municipal Judge Scovill imposed fines of $100 and costs on each of six individuals who had been found guilty of practicing medicine without a license, had pleaded guilty and agreed to accept the maximum fine. The prosecutions were undertaken by the State Board of Health.

Hospital Day Association.—The Chicago Hospital Day Association, chartered in February to promote organized and systematic charity giving for the support of hospitals in Cook county working under church patronage, will hold its first collections on May 1 and 2. The hospitals of the Methodist, Roman Catholic, Baptist and Presbyterian denominations have taken out active membership.

Personal.—Dr. Strother J. Beeson has returned from a trip around the world.——Dr. and Mrs. Mathias J. Seifert left March 15 for the Gulf Coast and Mexico.——Dr. and Mrs. E. Fletcher Ingals have returned from the South.——Mr. Elbert Clark, associate in anatomy in the University of Chicago and Rush Medical College, who has been appointed assistant professor of anatomy in the University of Manila, the Philippine Medical School, left Chicago March 19 to take up the duties of his new position.——Dr. Daniel W. Rogers has been appointed chief sanitary officer and medical inspector The Division, Illinois National Guard, with the rank of major.

IOWA

Antitoxin to be Sold at Cost.—The State Board of Health announces that it will supply antitoxin for diphtheria for the people of the state at cost.

New Building for Hospital.—A contract for the erection of the new Drake University Medical School Hospital, Des Moines, has been awarded. A three-story residence is to be remodeled and a three-story addition built.

Supreme Court Sustains State Board.—The Supreme Court, on February 10, decided that practitioners of "vital science" must be licensed by the State Board of Medical Examiners, and sustained the conviction of L. M. Adkins, Grinnell, convicted of practicing medicine without a license.

Practically Acquitted.—The Supreme Court has handed down a decision in the case of Dr. Franklin W. Sells, Osceola, who was found guilty of an attempt at criminal assault. The opinion granting him a new trial, suggests that unless the state is able to offer additional and further proof in support of the indictment, it will be advisable for the prosecution to enter dismissal.

Crofford Pardoned.—Dr. J. W. Crofford, Lamoni, sentenced to twelve years' imprisonment in the penitentiary on the ground that he had performed a criminal operation which resulted in the death of a young girl, was pardoned by the governor on the recommendation of the pardon board, February 26. The pardon is based on the affidavit of Dr. Artemas Brown of Des Moines, formerly of Leon, who testified that the girl came to him stating that she had had a criminal operation performed on her before she consulted Dr. Crofford.

Society Meetings.—The sixth annual meeting of the Southwestern Iowa Medical Association was held in Albia, February 17. Dr. Samuel L. Hauck, Ottumwa, was elected president; Dr. Frank E. Sampson, Creston, vice-president; Dr. Enos Mitchell, Osceola, secretary-treasurer. The next meeting of the society will be held in Creston.——At the annual meeting of the Waterloo Medical Association, March 2, Dr. DeWitt C. Huntoon was elected president; Dr. John O. A. Scroggy, vice-president, and Dr. Wayne M. Shirley, secretary.

Campaign Against Quacks.—The legislative committee of Page county and the county attorney have been untiring in their efforts to rid that part of the state of fraudulent and unlicensed healers. H. B. Yates, a so-called "magnetic healer," is said to have been recently convicted and fined a second time for illegal practice. The case was taken to the Supreme Court and remanded for new trial, and the defendant was again convicted. Another indictment is still pending, covering the period of practice since the first indictment.——A cancer cure specialist, with headquarters at St. Joseph, Mo., is said to have been convicted of illegal practice and a $300 fine imposed.

Personal.—Dr. Joseph J. Flannery, Des Moines, who has been seriously ill, was discharged from Mercy Hospital, March 4, recovered.——Dr. William R. Wall, Folsom, celebrated his eighty-eighth birthday anniversary, February 28.——Dr. Lee Weber, Davenport, lost the middle finger of his right hand on account of septicemia, due to a needle wound.——Dr. Fred P. Bellinger, Council Bluffs, has returned from Europe.——Dr. Harry Francis Rubel, Waverly, is in a hospital in Waterloo, on account of septicemia due to an operation wound.——Dr. Mathew A. Tinley has recovered from his recent attack of appendicitis and resumed practice.——Dr. Mary M. Nelson, Marshalltown, sustained severe injury in a runaway accident recently.——Dr. Mark E. Brown, Clinton, who has been seriously ill with heart disease, is slightly improved.——Dr. Samuel W. Moorehead has been reappointed postmaster of Keokuk.——Dr. Forest G. Weber, Cherokee, has been seriously ill with typhoid fever.——The office of Dr. Ervin W. Warner, Delhi, was destroyed by fire, February 9.——Several hundred dollars damage was done by fire to the residence of Dr. Ira D. Kauffman, State Center, February 9.——Dr. George W. Greaves, Spencer, who has been critically ill with cerebral hemorrhage, is reported to be improving.——Dr. Elijah W. Jay, Marshalltown, coroner of Marshall county, while going to a train in an ambulance to meet the wounded from the train wreck which occurred near Green Mountain, March 21, was thrown to the pavement and sustained severe injuries to the spine.

KENTUCKY

Personal.—Dr. Bernard McEuen, St. Charles, has been appointed house physician for the State Insane Hospital, Chattahoochee, Fla.

Bring Pressure to Bear on Governor.—The council of the Kentucky State Medical Association met in Frankfort, March 12, to urge the governor to approve the appropriation bill granting $30,000 to the Kentucky State Board of Health, the vital statistics bill, and the anti-abortion bill. The governor is said to have made no promises, but is reported to have signed the appropriation bill for the State Board of Health, March 16.

New Medical Association Formed.—The Louisville Society of Medicine was organized March 15 without capital stock, for the purpose of medical research and to promote good will and fellowship. The membership is limited to thirty and each year one honorary member is to be chosen. The following physicians are the incorporators: Drs. Waller O. Green, Richard T. Yoe, Thomas K. Van Zandt, John D. Trawick, Alphons R. Bizot, Claude G. Hoffman, Curran Pope, William J. Young, R. Alexander Bate, Edward C. Redmon, Vernon Robins, Thomas A. Hays, Herbert M. McConathy and John D. Hamilton.

Follow-Up System in School Inspection.—A follow-up system has been inaugurated between school inspectors of the Louisville Health Department and the Associated Charities. The school inspection has resulted in great good, but much work has gone for naught either through neglect or ignorance. Slips are given children found abnormal, defective or diseased, describing the defect, and these slips are meant to be taken to the parents by the children, but in many instances no attention is paid to them. By the cooperation inaugurated, workers from the Associated Charities, follow-up those cases in which operation or special treatment has been advised and see that this is carried out. If it should prove to be the case that the family has no regular physician the child is looked after at clinics and if anemia and evidence of malnutrition are present, the home life and surroundings are investigated and any defects remedied.

The Babies' Milk Fund.—The Jefferson County Fiscal Court, on March 15, appropriated $500 to the Louisville Babies' Milk Fund Association for its work during the coming summer. The general council appropriated $1,500 in February for this purpose and the balance of the $5,000 said to be needed for the work is to be raised by voluntary contributions of citizens.

It is proposed to reopen on May 1 the six milk distributing stations which were opened last year, with a trained nurse and station physician in each, and later to open additional stations in other thickly populated parts of the city. One station is to be located in a room of the new shelter house erected on one of the interior squares, especially provided for the commission by the park board. This is said to be the first time that a private philanthropy has been officially recognized in this way. The death rate in Louisville among the infant population for the last five years was 23 per cent., while that of the milk station babies, many of whom were very ill when application was made for milk, was only 6 per cent. The work of the association is a most important factor in lowering the death rate of children under 5 years of age.

MARYLAND

County Commissioners as Board of Health.—A bill has been introduced in the legislature, making the board of county commissioners of Howard county, the board of health of the county.

Physical Education for Women.—The Woman's Physical Education Association has been organized at Baltimore with Dr. Lillian Welsh as president, with the object of awakening a wider and more intelligent interest in physical education for women, and of laboring for the improvement and extension of gymnastic games and athletics among women and girls.

Maryland Alumni Meet.—At the annual reunion of the Maryland Alumni of the University of Pennsylvania, held in Baltimore, March 17, the following officers were elected: President, Dr. Joseph C. Bloodgood, Baltimore; vice-presidents, Drs. Howard A. Kelly, Baltimore, Clotworthy Birnie, Taneytown, J. McPherson Scott, Hagerstown, and Charles M. Ellis, Elkton; secretary, Dr. Daniel Z. Dunott, Baltimore, and treasurer, Dr. Wilbur M. Pearce, Baltimore.

Pleas for Hospital.—Dr. George W. Todd, Salisbury, and others, came before the Senate Finance Committee, March 10, and asked state aid to the extent of $3,000 for the Pine Bluff Sanatorium for Tuberculosis, near Salisbury.——Mercy Hospital, Baltimore, through two of the sisters of the institution, explained to the Committee on Ways and Means of the legislature, the work, the plans and hopes of the institution. They ask $15,000 a year for maintenance of the hospital, and $50,000 for new buildings.

County Society Endorses State Care of Insane.—The Baltimore County Medical Association, on the recommendation of Dr. Edward N. Brush of the Shepherd and Enoch Pratt Hospital, has formally endorsed the bills at present before the legislature for the state care of the insane, especially insisting on the right of the Commission in Lunacy of unimpeded inspection of all institutions for the insane or mentally defective at any time, and the power of inquiring into the method of commitment, the authority for detention of such persons, and inquiry, furthermore, into any and all allegations of improper commitment or detention or unjust or harsh treatment, and putting into operation the legal means for correction thereof. The resolution of endorsement further asserts that powers of inquiry into dietary, methods of restraint, kind of treatment, and all other questions relating to the care, detention and treatment of the insane or mentally defective, are universally recognized as proper functions of state commissions in lunacy, and that possession of such powers, clearly defined and specified by law, has in the past, in other communities, resulted in material improvement in the care of the insane, and in an increased and increasing confidence on the part of the public in the institutions for the care of the insane in these communities.

MINNESOTA

Typhoid Inoculation.—Lieut. Col. William D. Bannister, chief surgeon at Fort Snelling, Minn., is to inoculate with typhoid serum sixty-five soldiers at Fort Snelling, who have volunteered for the purpose.

Illegal Practitioner Sentenced.—William Schieman, who holds what purports to be a diploma from the New York Institute of Science, giving him the right to practice medicine, charged with practicing medicine without a license in St. Paul, is said to have been found guilty, March 10, and sentenced to imprisonment for fifteen days in the workhouse.

New Hospital for Minneapolis.—Hill Crest Surgical Hospital was opened recently in Minneapolis. It is a private hospital, with accommodation for 35 patients, and is intended to give special service in surgery, gynecology and diseases of the eye, ear, nose and throat. The constitution forbids payment of dividends, all earnings being employed for betterment of the service. The staff is composed of Drs. J. Warren Little and Archa E. Wilcox, surgery; Dr. Charles G. Weston, gynecology, and Dr. Frank C. Todd, eye, ear, nose and throat.

The New University Hospital.—Ground will be broken for the first permanent building of the University Hospital as soon as the weather permits. The building will be completed about January 1 next, and will have accommodation for about 130 patients. The University Hospital service is being conducted for the time being in temporary hospital buildings having 42 beds and accommodations for the hospital nurses and helpers. The board of regents has authorized the employment of a medical superintendent for the hospital for the fiscal year, beginning August 1. The Committee on Hospital is open to receive applications from available candidates. Communications may be addressed to the secretary of the Committee on Hospital, University of Minnesota, Minneapolis.

MISSOURI

Medical Societies Merge.—At the March 8 meeting of the St. Joseph-Buchanan County Medical Society, held in St. Joseph, the Andrew County Medical Society was merged with the local and county organization.

Arrangements for State Association Meeting.—Marion County Medical Association has appointed a committee composed of Drs. Robert H. Goodier, Edward T. Hornback, Clifton R. Dudley, Isaac E. Hill and William H. Hays, all of Hannibal, to comple[illegible] for the convention of the Missouri State [illegible] at Hannibal, May 3-5.

Personal.—Dr. R. R. Price, Slater, has been elected assistant physician of State Hospital No. 3, Nevada, vice Dr. Enoch C. Haile, Carterville, resigned.——Dr. C. D. Hefflin, at one time a practitioner of Bolckow, and sentenced to the penitentiary in 1904 under a sentence of fifty years' imprisonment for assault, has been pardoned by the governor.——Dr. A. C. Pettijohn, Brookfield, was elected superintendent of the State Hospital for the Insane, No. 2, St. Joseph, March 14.——Dr. Charles A. Hinson, Revere, fell while attempting to board a freight train at Madison, March 15, and was seriously injured.——Dr. George N. Newman, Mount Vernon, was injured in a Rock Island train wreck near Green Mountain, Iowa, March 21.

St. Louis

Personal.—Dr. John B. Logan is reported to be seriously ill with cerebral hemorrhage.——Dr. Richard L. Barrington has been appointed a member of the local pension board.

Donation to Hospital.—A donation of $20,000 has been made to St. Louis University Medical School by Ambassador Richard C. Kerens, to be used as an endowment fund for beds for charity patients in the Rebekah Hospital.

New Hospital Bills.—The hospital bills at present before the legislature to reorganize the hospital system of St. Louis, provide for a hospital commission to be appointed by the mayor, a hospital commissioner similar to the present health commissioner, to be appointed by the hospital board, a resident staff and a supplementary visiting staff.

Site for Sanatorium Bought.—Will H. Young has transferred to the St. Louis Society for the Relief and Prevention of Tuberculosis ten acres of land about five miles from Kirkwood, near the Meramec River, on which the society expects to establish a sanatorium and day-camp for the use of patients. There is a six-room house on the property, which will be remodeled, and several tents have been donated to the society.

NEW YORK

Change at Cornell.—The trustees of Cornell University have decided to limit the work in the medical department at Ithaca to one year in the future instead of two as has been the custom hitherto. The remainder of the course may be taken in New York City. Since a four years' course was provided in New York City the registration at Ithaca has been lighter.

Tuberculosis Conference.—About 500 delegates attended the opening session of the tuberculosis conference at Albany, March 18. Dr. George W. Goler, health officer of Rochester, declared that tuberculosis was a school problem. More than 70 per cent. of school children were physically incompetent. He advocated open air school rooms and suggested leaving the top sash out of all windows. Dr. Oscar H. Rogers of Yonkers urged that children of the public schools be taught the dangers of tuberculosis since 50 per cent. of the adult population among the working classes died of it. He believed that especially the children of the lower grades should be taught its dangers.

Bills Before the Legislature.—A bill providing that the real estate owned by any hospital located in the City of New York, as now constituted, actually dedicated and used by such hospital exclusively for hospital purposes shall be exempt from the assessments for public improvements which are now levied against such real estate or which may hereafter be levied and assessed therefor in said city.——A bill to amend the education law by adding a section relative to the establishment of a State School of Sanitary Science and Public Health at Cornell University.——A bill amending the liquor tax law by providing that liquors shall not be sold to any patient affected with tuberculosis in a camp, colony or hospital established by the state, county or municipal authority, and under the management and control thereof, except on the written prescription from a physician to such colony, camp or hospital.——A bill amending the agricultural law relative to the definition of adulterated milk providing that milk containing less than 11½ per cent. of milk solids shall be accounted adulterated.——A bill amending the penal law by adding a new section relative to sepultures and the burial of the dead on the canal lands of the state.——A bill prohibiting the discharge of the effluent of sewage disposal plants, of the effluent from any plant for the treatment and disposal of any wastes from industrial or manufacturing establishments and refuse from any sewer or drainage system in addition to the garbage offal and other decaying matter referred to in the present law. It provides a procedure before the Commissioner of Health on the question of pollution by municipalities and provides that orders of the commissioner shall be approved of by the governor and the attorney-general and be enforced by the attorney-general.——A bill creating a Department of Public Hospitals for the City of New York. There is to be a board of trustees of nine members, three of whom shall be women. Provision is also made for a medical board, composed of attending and consulting physicians and surgeons of hospitals. The head of the department is to be known as the Commissioner of Hospitals. There is also a provision for a public ambulance system and training school for nurses.

New York City

To Enlarge Bellevue Insane Pavilion.—Plans have been filed for the enlargement of Bellevue Hospital by the addition of a two-story annex which will be connected with the present insane pavilion by a covered corridor and staircase. This annex will cost $16,000.

Transportation of the Insane.—Temporary care of the insane and their transportation from their places of residence to hospitals will be henceforth in the hands of the officials of Bellevue and the Allied Hospitals. The Bellevue trustees have asked authority to issue special revenue bonds to an amount not exceeding $8,000 for the purpose of meeting this additional expense.

Society Secures Convictions.—Kings County Medical Society is said to have secured two convictions in the court of special session, March 7. Maurice T. Schachter is said to have pleaded guilty of selling improper medicine to a woman, and to have been sentenced to the New York Penitentiary for three months; S. T. Silverman, who pleaded guilty to prescribing without proper license, was found guilty, but sentence was suspended.

Medical Chair Endowed.—Mrs. Helen Hartley Jenkins has offered to New York University a gift of $100,000 for the endowment of a chair of medicine in the University and Bellevue Hospital Medical College. The gift was made through Dr. A. Alexander Smith. The foundation will be named the Marcellus Hartley chair of medicine after Mrs. Jenkins' father, who was a member of the university corporation, and was also a member of the committee on the medical college from the time of the consolidation of the medical schools.

Personal.—Dr. M. Allen Starr has sailed for Italy.——Dr. S. J. Kopetzky has accepted an invitation from the Detroit Medical College to hold an otologic clinic during the alumni meeting in May.——Dr. Moses D. Lederman has been elected clinical professor of laryngology and rhinology in the New York Polyclinic Medical School and Hospital.——It is reported that the officials of the town of Brighton, on account of opposition to the action of Dr. William B. Cochran, health officer of the town, regarding the construction of a tuberculosis hospital on the county farm, voted to remove him from office.——The appellate division of the supreme court has ordered Dr. Allan McLane Hamilton, who obtained judgment for $7,000 for professional services in the Thaw case, to prove his claim at a new trial of the case.——Dr. H. A. Bray has been appointed first assistant physician at the Raybrook State Hospital for Incipient Pulmonary Tuberculosis.——Dr. Amasa M. Brown has been appointed junior physician at the St. Lawrence State Hospital.——Dr. Lee W. Thomas has been appointed junior physician at the Central Islip State Hospital.

NORTH CAROLINA

Emergency Hospital to Open.—The Charity Aid Society of Greenville announces that the Emergency Hospital at the Salvation Army Citadel will be opened April 1. The hospital will have the use of five rooms, and members of the county medical society have agreed to give their services free to patients.

Addition to Watts Hospital.—George W. Watts, who gave Watts Hospital to the Durham County Medical Society and the city of Durham, at a cost of $400,000, has decided to add thirty more rooms at an additional cost of $60,000. Work will begin on the annex at once and it is expected to be ready to receive patients June 30.

Case Goes Against Physician.—In the case in the superior court of Charlotte, Mecklenburg county, in which Miss Daisy Long sued Dr. James A. Austin for $10,000 for malpractice for alleged failure to recognize and properly reduce a dislocated shoulder, the jury awarded the plaintiff $1,000 damages. Dr. Austin has appealed the case to the supreme court. The defendant's witnesses brought out the fact that a sufferer from an epileptic attack was not mentally responsible at the time, and the fall in which the injury is alleged to have been received followed an epileptic seizure.

OKLAHOMA

Antivaccination Bill Killed.—The effect of the Stafford Vaccination Bill was nullified by the action of the Senate March 12. The bill originally provided for compulsory vaccination, but Senator Davis put through an amendment providing that there should be no compulsory vaccination, which left the law self-contradictory. The bill finally failed to pass by a vote been received followed an epileptic seizure.

Medical Society Meeting.—At the annual meeting of the Cleveland County Medical Society at Norman, March 16, the following officers were elected: President, Dr. John D. McLaren, Norman; vice-president, Dr. James A. Davis, Norman; secretary-treasurer, Dr. A. C. Hirschfield, Norman; alternate-delegate to the state association, Dr. David W. Griffin, Norman, and censor, Dr. Robert E. Thacker, Lexington.

PENNSYLVANIA

State Board Appointment.—Dr. Robert E. Holmes, Harrisburg, has been appointed a member of the eclectic medical examining board, vice Dr. William H. Blake, Philadelphia, term expired.

Sanatorium Report.—At the annual meeting of the Free Hospital for Poor Consumptives, White Haven, March 14, the institution was shown to be in a better condition than at any previous time in its history, despite the absence of state aid. The secretary's report showed that 1,717 patients were treated during the year, 212 of whom were held over from the previous year. Of these 24 died and 562 were discharged cured, 131 remaining. The results of treatment showed disease arrest in 68 cases, much improvement in 103, and improvement in 276. The cost per patient per week was $9.05. The cost for the entire year was $103,433.61. The resources were $114,693. The following officers were elected at this meeting: President, Dr. Lawrence F. Flick, and managers, Drs. Talcott Williams, Charles J. Hatfield, Daniel J. McCarthy, Joseph Walsh, Richard H. Harte, Frank A. Craig, Henry R. M. Landis and Ward Brinton.

Philadelphia

Jewelry Bequest.—The will of the late Elizabeth P. Hopple provides that the testatrix's jewelry be sold and the proceeds applied to the establishment of a free bed in the children's ward of the Presbyterian Hospital at a cost of $2,000.

Fresh Air Magazine Resumes.—After a suspension of nearly a year, the Pennsylvania Society for the Study and Prevention of Tuberculosis has resumed the publication of its official organ, the *Fresh Air Magazine*, March 17. With assured financial support the society now feels confident that the permanency of this adjunct to its educational work is made certain.

Deaths Deplored by Medical Board.—March 17, at a meeting of the Philadelphia General Hospital's Medical Board, resolutions were adopted deploring the deaths of Dr. Wharton Sinkler and the Rev. Eugene McElhone. Dr. Sinkler was neurologist at the institution from 1888 to 1896. Father McElhone was a priest, who, for 33 years had attended the wants of Catholics in the institution, where he was chaplain. The resolutions were signed by Drs. Frederick P. Henry, Theo. H. Weisenburg and J. Hendrie Lloyd.

Personal.—Dr. G. Betton Massey sailed for Europe March 19.——Dr. James H. Closson, of Germantown, was seriously injured March 14, in a collision between his automobile and a trolley car.——Dr. Alexander C. Abbott has been selected as a delegate to the International Congress of Hygiene and Medicine, which meets in Buenos Ayres, Argentine Republic, next month. He will exhibit statistics and photographs showing the work of inspection of school children as conducted by the Bureau of Health, of which he was formerly chief.

Plans for Home Coming Week.—The Medical Alumni of the University of Pennsylvania will hold their annual reunion in Philadelphia during the Home Coming week, March 28-April 3. The program for the week includes symposia on serum diagnosis and therapy and cardiovascular diseases. The alumni dinner will be held on March 30. On March 29, the celebration of the centenary of the founding of the chair of obstetrics will be celebrated, Dr. Barton C. Hirst being the orator of the occasion. A smoker will be held on the evening of March 28.

WASHINGTON

Hospital Notes.—The Burlington Hospital, three stories in height, is practically completed at a cost of about $20,000. Dr. Orville R. Allen, formerly of Stanwood, will have charge of the hospital.——The new Sacred Heart Hospital, Spokane, which has been under construction for five years, will be opened this month. The building is six stories high, has 240 rooms, of which 100 are for private patients, and will have cost, when completed, about $800,000.

Personal.—Dr. Marion F. Setters, Spokane, charged with conducting the Spokane Cooperative Hospital Association, a one-dollar-a-month-fee institution, and found guilty, is said to have been unanimously expelled from membership from the Spokane County Medical Society at its regular meeting, March 3, for continued violation of the by-laws.——Mrs. Anna Chapman, Woodland, has been elected school director. ——Dr. Spencer S. Howe, Lynden, is reported to be seriously ill with diphtheria.——Drs. William D. Kirkpatrick and Frank J. Van Kirk, Bellingham, sailed for Hawaii, March 5.

GENERAL NEWS AND COMMENT

Congress on School Hygiene.—The third International Congress on School Hygiene will be held in Paris August 2-7. The object of the congress is to afford educators and hygienists and persons interested in the health and vigor of coming generations, an opportunity to become personally acquainted and exchange ideas with those who are doing similar work in other countries. The work of the congress is divided into eleven sections, namely: educational buildings and furnishings; hygiene of residential schools; medical inspection of schools and individual health records; practical measures for actual application; education and physical training; the prevention of contagious diseases in schools—diseases caused by school attendance; out of school hygiene, open air schools; holiday colonies; the teaching staff, their hygiene, their relation with homes and with the school doctors; teaching of hygiene to teachers, scholars and parents; teaching methods and syllabuses in relation to school hygiene; special schools for abnormal children, and hygiene of the eye, ear, mouth and throat. During the congress, excursions and visits to French schools will be organized, and an exhibit of school hygiene will be placed at the disposal of the committee. Dr. L. Dufestel, medical inspector of the public schools of Paris, 10 Boulevard Magenta, is secretary-general of the congress, and Dr. Thomas A. Storey, College of the City of New York, Convent avenue and 139th street, has copies of the circulars relating to the congress, which he will be glad to forward to any who desire.

FOREIGN

Recent Deaths in the Profession Abroad.—Among the members of the profession abroad who have recently died, besides those mentioned elsewhere, are Dr. J. Krannhals of Riga, Russia, for twenty years one of the editors of the *St. Petersburg. medizinische Wochenschrift*, who died from exanthematous typhus at Riga, aged 56. Krannhals was a frequent contributor to medical literature, especially on pseudomeningitis and the tuberculin reactions, and on his deathbed he dictated the conclusion of another article on this last-named subject. ——Prof. S. S. Botkin, of St. Petersburg, body physician to the czar.——Dr. S. Rona, professor of dermatology at Budapest, author of several works on his specialty.

Recent Medical Congresses in Russia.—A letter from Moscow in the last *Medizinische Klinik* states that six medical congresses have been held in Russia since the beginning of the year; the authorities have previously refused to consent to the summoning of medical congresses since their experience with the congress of the national medical association, the Pirogoff Society, whose annual meeting in 1904 started the revolution by its resolutions demanding political freedom for the Russian people as indispensable for physical, mental and moral welfare. The series of congresses this year opened with the first congress for internal medicine. This had a strictly academic character, discussing among other topics, thyroid treatment of obesity, Wagner reporting 160 cases with brilliant results. The tuberculin reactions were also discussed, most of the speakers remarking that the cutaneous technic was instructive only so far as children were concerned; the majority commended the ocular test as useful and harmless. Gastric ulcer was discussed at a joint meeting with the surgical congress. The twelfth congress of physicians and physicists, similar to the German *Naturforscher* congresses, was attended by 5,000 members. No hall could be found in Moscow large enough to accommodate all the members at one time. A veterinary congress followed; one of the resolutions adopted urged that women be admitted to the veterinary colleges. The congress of alienists was held at St. Petersburg, with 275 members in attendance, and this was followed by the antialcohol congress which drew up some drastic resolutions, one condemning the present system of state liquor monopoly which is breeding drunkards and undermining the peasantry, while the amount of liquor consumed is constantly increasing. The authorities here interfered in the proceedings and a few censored resolutions were finally adopted by the few members left in the hall. All of the speakers from the labor groups and two correspondents of "liberal" lay journals were arrested the next day. Some of the labor members were soon released, but all the others are still locked up.

LONDON LETTER

(From Our Regular Correspondent)

London, March 12, 1910.

The Polyclinic

The annual report of the Medical Graduates College and Polyclinic shows that the financial difficulties which, as stated in a previous letter to The Journal, threatened to bring this useful and unique institution to an end are being surmounted. Both in its educational and financial relations, the Polyclinic has had a distinctly successful year. This is evidenced not only by the balance sheet showing a moderate sum on the credit side but by an increase in the number of subscribers from 359 to 470 in spite of the fact that in consequence of the uncertain condition of affairs in the early part of the year many of the subscribers withdrew. The attendance at the clinical demonstrations and lectures has also been large. The number of patients shown during the year was 893. As most of these were cases which had been selected in consequence of their exceptional interest the importance of this figure is greater than might at first appear. The success which the college is able to record has been rendered possible only by the continued support and practical generosity of Sir Jonathan Hutchinson. A legacy of $1,500 from Mr. Alfred Phillips, the late honorary librarian, has also proved of great assistance. In all departments of the college work—clinics, lectures, practical classes, tutorial classes and laboratory investigation—there has been increased activity. New classes have been instituted in the practical use of the cystoscope and sigmoidoscope, the administration of anesthetics, and the medical application of massage and electricity. In connection with the laboratory there has been established a department for preparation of vaccines. It differs from other postgraduate schools in that it does not draw its teachers from only one hospital but from the entire United Kingdom. The Hutchinson Museum of portraits of disease, collected by Sir Jonathan Hutchinson, offers an opportunity for study comparable only to that of the famous St. Louis Hospital of Paris. Though the skin diseases are principally illustrated, unlike the latter institution, every department of medicine which lends itself to pictorial illustration is represented. Its founder has during his long career ever been the great apostle of the pictorial representation of disease and of clinical museums, both for purposes of teaching and investigation, and his lifework shows their great value.

The Institution of a Diploma in Psychiatry

The institution of a diploma in psychiatry is under the consideration of the Royal College of Physicians and other examining bodies to whom it has been suggested by the committee of the Medico-Psychological Association of Great Britain and Ireland. It has long been felt that there is no adequate systematic instruction in psychiatry in Great Britain. Young physicians on their appointment as medical officers to asylums have to face work and problems of which they have had no previous knowledge and in preparation for which they can obtain no training. Lectures on psychologic medicine and pathologic laboratories have been established here and there, and in one or two universities chairs of experimental psychology have been founded but there is no systematic course of instruction and no recognized diploma. The Medico-Psychological Association considers that the time has arrived when such a course and diploma should be established in the principal medical schools, and that the institution of a diploma would impose a high standard of acquirement on the officers of asylums, stimulate the scientific study of insanity, and have an effect in widening and deepening our knowledge of the subject comparable with the effect produced in tropical diseases by the institution of a diploma in this subject. The association also considers that the minimum period of postgraduate work to obtain the diploma should be one year; that the subjects should be divided into (a) compulsory (b) optional; that in the former should be included (1) the anatomy, psychology, and pathology of the nervous system; (2) psychology, normal and morbid; (3) clinical pathology; (4) clinical neurology; (5) psychiatry—systematic, clinical and medicolegal. The optional subjects suggested are: (1) experimental psychology, (2) biochemistry, (3) bacteriology, (4) comparative anatomy and physiology of the nervous system, (5) eugenics. It is suggested that only one optional subject should be required. At a meeting of a comitia of the Royal College of Physicians these proposals were discussed, and Dr. C. A. Mercier, president of the Medico-Psychological Association, moved a resolution that a committee be appointed to settle the conditions under which a postgraduate diploma in psychiatry shall be granted. He said that it was an undoubted deplorable fact that psychiatry was lagging behind other departments of medicine, and had not participated as much as they had in the striking advances of the last few decades. He admitted that this was in part due to the inherent difficulty of the subject, but he also attributed it largely to the fact that the junior staff of asylums with abundant leisure and opportunities for research were deterred from undertaking it by lack of incentive. No scientific work that they might do in any way bettered their position, increased their reputation with their employers or assisted them to promotion. The institution of a diploma could scarcely fail to have the effect that it had in the case of public health of educating public bodies into appreciating that special knowledge was necessary for these responsible posts. The resolution was supported by other eminent psychiatrists. It was opposed by Dr. Norman Moore on the grounds that if it is in the interests of the public that physicians should know something of psychiatry, that knowledge should be obtained by adding to the medical curriculum, and not by depriving any of one of the ways for earning a living. An amendment appointing a committee to consider the subject was adopted. The struggle for psychiatry to obtain recognition is only a repetition of what has happened in the case of the other specialties. The more conservative minds in the profession will no doubt obstruct the reform, but with success only for a time.

The Sleeping Sickness Commission

Col. Sir David Bruce, the head of the commission despatched in September, 1908, by the government under the direction of the Royal Society to investigate sleeping sickness in Africa has returned on the termination of his mission. The headquarters of the mission was at a place called Mpunu, a desolate and remote spot six miles from the northern shore of Lake Victoria Nyanza, and about the same distance from a great concentration and isolatión camp where hundreds of the victims of sleeping sickness were taken to end their days. The ravages of the disease are shown by the fact that on the peninsula on which the laboratory was erected there were formerly 50 churches, but all except one have now been closed. The discovery made by Dr. Klein in German East Africa that the tsetse fly can remain infective for several months or even much longer has vitiated the theory that infected zones cleared of their inhabitants can after a brief period be repopulated by healthy persons. In the fly area, the most energetic steps have been taken to remove all the inhabitants. One island which formely had a poulation of 22,000 was cleared of 4,000 natives—all that were left by the ravages of the disease. The population of the lake shores had been reduced to one-fifth, and all these have been moved. Strips of land in the neighborhood of the landing places have also been cleared and all the native canoes destroyed. In consequence, no fresh cases of sleeping sickness are occurring, and it may thus be inferred that the epidemic has been stamped out. Further investigation is being made to see how long the fly remains infective

PARIS LETTER

(*From Our Regular Correspondent*)

Paris, March 11, 1910.

A Manifesto in Regard to the Approaching Concours de l'Agrégation

After the *concours de l'agrégation* of 1908, a committee formed by various professional organizations (*Union des syndicats médicaux de France, Comité de vigilance du Congrès des praticiens*, etc.) presented to the authorities a memoir summing up the protest of the medical profession (The Journal, March 27, 1909, lii, 1046). This memoir having received no reply and the same system being maintained for the *concours* which is soon to be held, the committee has appealed to medical opinion and has published a manifesto in which the defects of the present system of the *concours de l'agrégation* are reviewed. Pedagogically, the *agrégation* is the consecration of the supremacy of theoretical over practical instruction, for the *concours* is based on theory. Scientifically, according to the manifesto, the *agrégation* is not merely useless but injurious; useless because the preparation for it is merely bookish; injurious because such preparation discourages scientific research. The *agrégation*, moreover, tends toward the division of the medical profession by putting all instruction in the hands of a closed caste.

The French League for Physical Education

Under the honorary presidency of Prof. Charles Richet and the acting presidency of Professor Gilbert there has just been founded in Paris a League for Physical Education, which proposes, among other things, to make scientific researches into the methods to be employed in gymnastics and in sports, so that movements which, for lack of precise rules, are at present either unused or abused may be prescribed with definite precision. The league proposes also to give instruction by lectures, by practical courses, by the organization of festivals, contests, walks and excursions, by the establishment of gymnasiums, etc. It will give particular attention to the physical education of women and girls, which has been so much neglected up to the present. For this purpose it will have sections devoted to feminine sports. A scientific committee composed of all well-known persons concerned with physical education will ultimately be formed. The league has opened a competition the object of which is to obtain a simple, short and practical book on physical education, suitable for every one, children and adults, men and women.

The Society for the Protection of Infancy

During the recent general assembly of the Society for the Protection of Infancy, Dr. Porak, who presided, related the history of the society since its foundation in 1865. The object of the society is to encourage and to protect maternal breastfeeding, to preserve infants at the breast from the dangers which threaten them, to protect children against abandonment, neglect, and bad treatment, and, in short, to popularize in families the principles of the hygiene of infancy. Since its foundation, the society has expended 1,566,710 francs (about $300,000); more than 53,000 families have received about 1,092,000 francs (about $200,000).

Jubilee of Dr. Gellé Senior

Germany and Austria having recently honored the deans of otology, Politzer, Lucae and Schwartze, the pupils and friends of Dr. Gellé senior, one of the pioneers of otologic science, believed that the moment had come to celebrate his jubilee and to give sympathetic recognition to the merit and the usefulness of his long and fruitful labors. A committee composed of Professors Bouchard, Dastre, S. Duplay, Gley, Laveran, F. Raymond, and otologists like Professor Moure, and Drs. Bonnier, Castex, Lermoyez and Sébileau, decided to open a subscription for a medal for Dr. Gellé.

A Triumph of Empiricism

The minister of labor has just submitted for examination by the commission on secret remedies of the Academy of Medicine a treatment for anthrax recommended by an empiric. This treatment, which would seem to consist simply of cauterization by caustic potash, is much in favor among workmen in Mazamet, department of the Tarn, who are much exposed to anthrax because they handle wool. These workmen refuse to consult physicians or to submit to any other treatment.

Discontent Among Private Nurses

Much discontent has been felt for some time among private nurses and masseurs. They complain that they are exploited by the employment agencies which supply nurses. According [illegible]hem, these establishments ask from 200 to 300 fra

($40 to $60) a month from families, which employ the nurses, and pay their employees only 50 to 60 francs ($10 to $12). When they employ outside nurses they demand 50 to 60 per cent. of the salaries paid.

Unwarranted Use of the Name of Dr. Huchard in a Pharmaceutical Advertisement

In the last number of the *Journal des Praticiens*, Dr. Huchard protests energetically against the unwarranted use of his name by manufacturers in Mexico who have put out pharmaceutical preparations to which they have given the name of "Dr. Huchard's Pills." In advertisements in the Mexican lay press, praising this preparation under the title of "Radical Cure of Maladies of the Digestive Organs," one reads that "the learned Dr. Huchard of Paris, inspired by the studies of his colleagues and his own experiences in hospitals and laboratories, has finally solved this complicated problem by inventing the celebrated pills which bear his name, and which, although they have been used by thousands of patients, have never once disappointed expectations. . . . Dr. Huchard, who can never be sufficiently praised, has composed two formulas; gilded pills for cases with diarrhea; silvered pills for cases without diarrhea."

Dr. Huchard intends to write to the French minister in Mexico about the matter.

Election of Two National Associates to the Academy of Medicine

In its session of March 8, the Academy of Medicine elected as national associates Dr. Poncet, professor of clinical surgery at the Lyons college of medicine and M. Balland, former head pharmacist of the army, well known by his work on alimentary substances.

VIENNA LETTER

(From Our Regular Correspondent).

VIENNA, March 4, 1910.

Investigation on the Dwellings of Tuberculous Patients

Dr. Burkhard has recently been investigating the condition of 250 dwellings inhabited by tuberculous laborers in an Austrian city. The 250 lodgings had only 487 sleeping-rooms. The number occupying each lodging varied between 2 and 13. Sometimes 6 to 8 persons lived in a lodging consisting of one room only. The dangerous conditions are vividly illustrated by the fact that of the 292 positively tuberculous persons, 93 slept with other persons in one bed; among those thus exposed to infection were especially children. Bedridden patients were often found accommodated in the kitchen (in 25 per cent.) or in a dark corner of the room (18 per cent.). There was no knowledge how to deal with tuberculous sputum. Children were found playing with sawdust from a spittoon used by tuberculous persons.

The publication of this painstaking exact investigation has caused much excitement, but it shows where the fight against phthisis has to be pressed hardest. Similar conditions prevail in all cities where tuberculous laborers live. The primary source of infection consists of overcrowding and slums.

Unveiling of a Statue of Professor Jaeger

The famous ophthalmologist, Professor Jaeger von Jaxtthal, who died in 1884 and who for eighteen years was the foremost eye surgeon of Europe, was honored a few days ago by the erection of a life-sized statue in the aula or hall of the University of Vienna. Professor Fuchs delivered the customary speech on this occasion. Jaeger was the son of a famous ophthalmologist; was the grandson, on his mother's side, of the famous ophthalmologist Beer, who had been the first (and only) eye surgeon of Europe of his time, and was married to the daughter of Arlt, who was considered the best eye diagnostician in the seventies of the last century. One of the best works of Jaeger was the "Atlas of the Fundus Oculi," which has not been surpassed yet as regards its lifelike depictions of the conditions of the retina.

Sale of Radium Permitted in Austria

The sale of radium salt has been now authorized in this country, but the government has taken the trade into its own hands. The price of *1 mg. (1/60 of a grain) has been* placed at 400 kronen, or $80, but smaller quantities may be purchased. Only the barium chlorid of radium can be had, in a strength of 5, 10 and 25 per cent. It is put up in small brass capsules, one wall of which consists of lead; here the salt is deposited and an opening covered by a mica plate permits the use of the radium for therapeutic applications, without opening the cell. A hall-mark certifies the strength and weight of the substance. Already many physicians have availed themselves of the opportunity of obtaining radium cells.

Pharmacology

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

MICAJAH'S MEDICATED UTERINE WAFERS

W. A. Puckner and W. S. Hilpert

Evidently touched by the generosity of the manufacturer in sending him a sample and literature, but not too favorably impressed by the claims made for the preparation referred to, a correspondent writes:

> I enclose a valuable sample and literature just received. Such a palpable humbug as Micajah's Uterine Wafers would hardly seem to need notice were it not probably true that many practitioners habituated *to the use of samples are still influenced* by the glowing accounts of cures wrought; especially when attested by such a name and title as "Elmore Palmer, M.D., Ex-President Western New York Medical Society." This secret gynecologic medicament is recommended for anything from "Pruritis Vulvæ," "Enlargement of the Womb," "Displacements," "Cystocele and Rectocele," to the "Menopause."
>
> Following the definition that by her "stomach" a woman means anything from her chin to her knees, the ex-president with truly noble impartiality has with the wonderful Micajah wafers wrought lightning cures all the way from "stone-bruise" of the heel to nasal polyp and influenza, and some of them are male patients, *too.*

With the foregoing as an impetus to investigate the nature of this much advertised nostrum, the wafers were submitted to analysis by the Association laboratory. The report follows:

LABORATORY FINDINGS

Trade packages of the wafers purchased on the open market bear the name of the preparation and that of the manufacturers, Micajah & Co., Warren, Pa. The label states that the nostrum is a:

> "Disinfectant, astringent and local alterative of the greatest virtue. *A remedy for the local treatment of the diseases of women.* Inflammation, engorgement and prolapse of the womb, vaginitis, leucorrhea, menstrual derangements and the disturbances incidental to the *menopause. Also highly recommended for affections* of the mucous membranes in general, particularly those of the nose, the throat, the rectum, and for gonorrhea, cystitis, etc."
>
> "This box contains wafers for three months' treatment."
>
> "Price per box $1.00."

The box contained 25 tablets, and a circular entitled, "Hints on the treatment of diseases of women," in which directions for the treatment of many diseases are given. It ends with a paragraph which contains the following statement:

> "There is *no doubt* that the field of usefulness of Micajah's Wafers can be indefinitely enlarged by the ingenuity and therapeutic skill of the physician."

Much of the advertising "literature" is in the form of leaflets, brochures and small pamphlets full of testimonials by physicians.

Micajah's uterine wafers as found on the market are white, hexagonal tablets, odorless and possessing an astringent taste. The wafers are soluble in water with extreme difficulty. Hot hydrochloric acid and alkali hydroxids dissolve the powdered tablets readily, leaving a slight residue which under the microscope and by physical tests was identified as lycopodium.

The acid solution of the wafers responded to qualitative tests which indicated the presence of potassium, sodium, aluminum, sulphate, borate and a mere trace of a fatty material. Quantitative estimation of boric acid, aluminum, sulphate, sodium and potassium were made, which indicated that Micajah's Uterine Wafers consist of alum more or less anhydrous or "burnt," boric acid and borax in approximately the following proportions:[1]

Alum, dried	59.86 per cent.
Borax, dried	15.62 per cent.
Boric acid	5.67 per cent.
Water of hydration	18.85 per cent.

The average weight of the tablets is 0.7791 gm. (11.8 grains) and allowing for the fact that the quantity of water present in commercial exsiccated alum varies, each tablet would contain approximately 0.4986 gm. (7.8 grains) burnt alum; 0.2337 gm. (3.6 grains) crystallized borax, and 0.0467 gm. (0.7 grain) boric acid.

COMMENT

Judging from the "literature" that goes with the packages of this nostrum, *one might* imagine that it was put up absolutely for the layman, but this is not the case. It is advertised only in medical journals and not directly to the public; it is not necessary, for every physician who prescribes it at the same time places in the hands of his patient advertising matter intended to influence that patient—and it usually does. As a result this preparation is being bought by the public direct; to what extent we do not know, but physicians are responsible for it. Probably if physicians realized that the same interests that control Piso's Consumption Cure also control Micajah's Medicated Uterine Wafers they would not be so ready to act as the unpaid agents for the concern.

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[1] The details of the analysis will be published in the annual report of the laboratory.

That such simple astringents and feeble antiseptics as alum, borax and boric acid could have such remarkable curative effects on uterine diseases is absurd. The serious aspect of the matter is, that, by the encouragement given them in the advertising literature to treat themselves, women may neglect proper surgical or medical attention in the early stages of serious diseases such as cancer or dangerous pelvic infections, until they get beyond the hope of proper management. But when nostrum promoters urge the use of such inefficient remedies in the treatment of gonorrhea, it is time to look at the matter seriously. Considering the vital social significance of the venereal diseases, the employment of useless remedies can only favor the spread of these infections, which cause such a large proportion of the diseases which afflict women particularly.

The medical profession for the most part has become mentally calloused to the exaggerated claims of the nostrum makers and does not make sufficient effort to condemn them. There may be some physicians, however, who use such preparations as these wafers in their practice, as is indicated by the circulars, wherein the manufacturers suggest that their "usefulness can be indefinitely enlarged by the ingenuity and therapeutic skill of the physician." It is only occasionally that a physician voices his indignation as to these humbugs, as in the case of the physician whose letter is quoted above.

SAL HEPATICA

This wonderful mixture, according to the advertisements, is "a combination of the tonic, alterative and laxative salts similar to the celebrated 'bitter waters' of Europe, as determined by actual chemical analysis of these waters, and fortified by the addition of lithia and sodium phosphate"—a description, by the way, that is used *verbatim et literatim* by the A. D. S. in describing its "Hepatic Salts."

As usual, in inflicting this remedy on the public, the manufacturer makes use of cast-off medical theories and unwarranted claims. The marked absurdity of some of the statements indicates that they are intended for the lay public. Surely no nostrum-maker would suppose that he could delude even the most credulous portion of the medical profession into believing the statements made in the advertisements concerning sal hepatica, namely, that the same remedy is a uric-acid eliminant, hepatic stimulant, a specific for gout, rheumatism, cirrhosis of the liver, Bright's disease, gravel, tuberculosis, struma, marasmus, dyspepsia, infantile fluxes, etc.

The following analysis of "Sal Hepatica" was published in the *Druggists Circular*, February, 1909, p. 78:

Sodium chlorid	13.05 parts
Sodium sulphate	26.27 parts
Sodium phosphate	29.80 parts
Sodium bicarbonate	18.00 parts
Lithium phosphate	0.04 part
Citric and tartaric acids, to make	100.00 parts

Our old friend lithium is added, undoubtedly, to influence the few physicians who still accept the discarded theory regarding the solvent effect of lithium salts on uric acid. Such physicians must be easily influenced if they can believe that 4/10,000 parts of lithium would have any therapeutic effect!

Thus once more the medical profession is asked to indorse a nostrum consisting of a mixture of simple saline laxatives such as any physician can prescribe and any druggist prepare, and to sanction the blatant advertising of the mixture as a specific in such grave maladies as cirrhosis of the liver and Bright's disease. This advertising has already made the drug known to the laity, who see in the shrewdly chosen name an indication of the use of the nostrum in liver disease and that undefined but favorite malady of the public, "biliousness."

The abuse of saline cathartics by the public is an evil deserving of serious attention. Rightly or wrongly, the laity fear constipation, and naturally take what they are taught to believe is the cheapest and simplest course for its relief, self-drugging by means of saline cathartics or the extensively advertised purgative mineral waters. This habit is responsible for much of the distressing spastic constipation that exists, and its accompanying neurasthenia. The advertisement and sale to the laity of such a nostrum as "Sal Hepatica" can only increase these evil results and the physician who aids and abets the evil by using the preparation should reflect whether he is thereby not only encouraging a fraud on the public, but also, what is even worse, helping to impair the public health.

Correspondence

Cecostomy vs. Appendicostomy

To the Editor:—The very interesting and instructive article on "A New Method of Appendicostomy," by Dr. Pettyjohn, in The Journal, March 12, 1910, carries with it some incidental confirmation of my contention (The Journal, March 5, 1910), that in certain cases cecostomy is to be preferred to appendicostomy. Thus Dr. Pettyjohn speaks of "cases in which the mesoappendix is too short or too narrow to permit the appendix to be drawn out of the abdomen;" he likewise very properly urges precaution "not to interfere with the blood supply of that portion of it which is to form the canal;" he tells us furthermore that "considerable swelling always occurs in the walls of the appendix;" that "it is much easier to open the appendix and introduce the catheter at once than to wait;" he alludes to conditions "requiring considerable stretching of the appendix to bring it to the surface" and admonishes us that "such a result is most reprehensible and may cause stopping of the blood supply with a resultant sloughing of the appendix."

My observations and the recorded experience of many other operators in these particulars are in entire accord with those of Dr. Pettyjohn. They have indeed so impressed me that, in the absence of special indications, I have been induced to adopt cecostomy rather than appendicostomy as the operation of choice. The mere fact that the presenting pouch of the cecum lies against the abdominal wall to which it can be attached practically *in situ naturalis* without present or subsequent traction and consequent pain is an additional reason of great weight in determining my operative policy in these cases. Too much weight has, I am sure, been given to the argument that we need a tube, the appendix is a tube, therefore use the appendix. In no case is it a good tube to begin with and in the majority of these cases it is no tube at all to end with. Charles A. L. Reed, Cincinnati.

The Davis Memorial

To the Members of the American Medical Association:—It is desired that every reader of this appeal consider himself a self-appointed member of the committee to procure funds for the Davis Memorial. The Association itself has set the example by appropriating $5,000, provided a total of $25,000 be raised for this worthy object. Each state is represented by an appointee on the committee for this purpose. A considerable sum of money has already been raised and one or two states have contributed more than their apportionment.

Of course the completion of this work is not due to a lack of appreciation of the services and character of the founder of our great Association. Perplexed in the busy routine of daily demand the privilege of the recognition has simply been forgotten. Your committee would have every member of the medical profession of America interested and represented in this memorial. A little work done in each district and state society and the service is completed. Let the money be forwarded through your representatives directly to the treasurer of the Association, Dr. Frank Billings, 100 State street, Chicago. Let us join hands and hearts in the completion of a work already too long delayed.

HENRY O. MARCY, M.D., Boston, Chairman.

A Department of Public Health

CINCINNATI, March 19, 1910.

To the Editor:—In THE JOURNAL, March 19, just received, appears some correspondence between myself and Hon. Robert L. Owen of the United States Senate, regarding proposed legislation looking toward the establishment of a Department of Public Health. In the second paragraph of my letter, on page 985 of THE JOURNAL, appears a reference to the action taken by the Legislative Conference held at Chicago, March 2, 1910. My letter was written to Senator Owen on March 10, at which time I had not seen the official minutes of the Conference. The minutes which have reached me only to-day show that two references were made to this subject.

1. The report of the Committee on Federal and State Regulation of Public Health reads as follows: "We suggest that a bill be passed that will give recognition of the health interests of the country in the title of a department, and that within that department there be organized an efficient bureau of health to consist of all present public national health agencies." This report was adopted.

2. The Committee on Conclusions and Plans of Action presented, as its fifth resolution, the following:

> *Resolved,* That the Conference heartily endorses the position taken by the President in his message to Congress in regard to national health legislation, and urges on Congress the passage of legislation looking toward such ends.

This resolution was also adopted.

I have written to Senator Owen, correcting my letter of March 10, in this respect. In the interests of accuracy, I ask that you will kindly give this letter space in the Correspondence Department of THE JOURNAL.

CHARLES A. L. REED.

The Late Dr. James Sykes and a Cholera Epidemic

To the Editor:—Mention of the name of James Sykes in the list of medical dead printed in THE JOURNAL, March 19, recalls the fact that the deceased physician had near relations to a tragedy which, perhaps, has no equal in modern medico-military history—one, possibly unique in somberness—and, as Dr. Sykes aided me in getting together facts pertinent thereto, space is asked for a statement of this event in order that his memory may be honored, and that a younger generation of physicians may know of the power of Asiatic cholera to destroy when opportunity is afforded.

My attention was called to this occurrence in 1894 by seeing a monument, in the burying-ground of the St. Louis Quarantine Hospital, just below Jefferson Barracks, erected in memory of one hundred and seventy-five non-commissioned officers and soldiers of the Fifty-sixth United States Colored Infantry who died of cholera in 1866. The inscription seemed so startling as to invite inquiry; this was undertaken, and the collected facts were read before a local medical society and published in the *New York Medical Journal*, March 30, 1895.

The surgeon-general of the Army was appealed to for such information as was on record and this, though scanty and of non-medical character, was promptly supplied. Through this and other means, it was found possible to get in touch with some of the surviving officers; Dr. Sykes was the assistant surgeon of the regiment.

An outline of this tragical event is given in the following:

> Early in August, 1866, the regiment in question was on duty in Arkansas, five companies being stationed at Duvall's Bluff, and the remainder of the command, with regimental headquarters, was at Helena.
>
> Being ordered to proceed to Omaha via St. Louis, the command, seven hundred and eight strong, assembled at Helena, and the five companies that had been at Duvall's Bluff embarked on board the steamer *Continental* on the evening of August 9. The remainder followed on the *Platte Valley* the next morning.
>
> The colonel states that the command had been unusually healthy during the summer, and the surgeon confirms this, saying that the regiment was in the best of health at the time of embarking.
>
> No medical officer accompanied the command on this fatal journey, which has but one known parallel in American military-medical history, and perhaps few anywhere else.
>
> Within a few hours after the boats swung out into the current of the Mississippi River mischief began (the first patient was left dying on the wharf at Memphis), and by the time the *Continental* reached Cairo she had on board thirteen corpses and between fifty and sixty cases of cholera, all belonging to this regiment. More than fifty men of this command died on this boat before St. Louis was reached, the second boat not suffering so severely, but hardly a soldier in the entire regiment escaped an attack of the disease.
>
> About a week after these troops left Helena the commander reported the deaths to that time among his men as one hundred and thirty-nine, but the end was not reached until the number recorded on the monument had perished, if, indeed, that number is correct, as it appears from the War Department records and information from other trustworthy sources, that the mortality in this body of men from this one cause was nearer one hundred and ninety than one hundred and seventy-five—a loss of more than one in every four in the command.

In a personal letter dated April 2, 1894, Dr. Sykes commented on certain features of this outbreak, as follows:

> I was informed at the time that the most infected boat had a quantity of raw sugar going to the refineries, and that the soldiers, being on the boiler deck, burst open several hogsheads of it, and ate as only colored men can. My own theory is that the soldiers either took the cholera microbes from Helena or else these were already on the boat, and then, gorging themselves with raw sugar, allowed the pestilence to get in its deadly work. The fact that but very few officers took the disease at all, and they in a light form, would seem to indicate that it was something in the diet, rather than the water, as all used river water alike. But one officer died. (Lieutenant Brooks), and he from a relapse occurring after he had recovered so far as to take a leave of absence to visit his family living in St. Louis. After the troops arrived at St. Louis they were removed to quarantine, and the cholera became general among all the companies. The above is from memory, and while I doubtless have forgotten some facts, the narrative is substantially correct.

GEORGE HOMAN, M.D.

Miscellany

The Effects of X-Ray Treatment on Leucemia.—In myelogenous leucemia and in chronic lymphatic leucemia H. Pribram and H. Rotky (*Ztschr. f. exper. Path. u. Therap.*, 1909, vi, 75) found that the *x*-ray treatment was followed by an improvement in both the general systemic condition and in the clinical condition of the blood. In 4 cases of myelogenous leucemia, in which the spleen was subjected to intensive treatment with the *x*-ray (the remainder of the abdomen being protected by the Jaksch silver plate) a marked improvement in the general condition as well as in the blood-picture, with little or no damage to the skin, was the result. In 2 of these cases the total number of leucocytes quickly diminished, while in the other 2 the reduction of the number of leucocytes was more gradual and less complete. In all the percentage of mononuclear leucocytes decreased while that of the polynuclear neutrophiles rose. In 1 of these cases, through a reduction in the eosinophiles and basophiles and a marked reduction in the lymphocytes, the blood-picture soon approximated normal. Moderate intermittent exposures of the surface and exposure of the bones to *x*-ray were followed by less beneficial results. In 1 case of chronic lymphatic leucemia intensive treatment of the region of the affected glands soon reduced the total leucocyte count to normal, but did not affect the percentage of the different types of leucocytes. The total number of red blood corpuscles, of nucleated red blood corpuscles and the total hemoglobin content of the blood were not affected by the treatment in either of the 5 cases. In the myelogenous leucemia, during the reduction of the number of leucocytes, there was observed an increase in the total output of nitrogen, uric acid and phosphoric acid, which persisted for some time after the leucocyte count reached the minimum. In 1 case of advanced acute lymphemia *x*-ray treatment gave no beneficial results.

Treatment of Rupture of the Uterus.—E. Scipiades reports a series of 97 cases of rupture of the uterus all treated according to the same principles during the last 25 years at the Budapest clinic, the only unbroken series of the kind on record, he remarks. His communication on the subject is published as No. 553 of the *Sammlung klinischer Vorträge*. In 66 cases of complete rupture, 34.92 per cent. of the women recovered, including 40.38 per cent. treated by what he calls "exact tamponing," while 44.95 per cent. recovered in the cases without complicating injury of the bladder. The proportion of recoveries was 87.5 per cent. in the 8 women with complete rupture, free from complications, tamponed and removed to the clinic two days after delivery. These figures, he asserts, confirm assertions in favor of conservative measures. After the urine has been drawn, the child is delivered by the vaginal route, with the operative technic deemed advisable. As soon as delivery is complete, the assistant holds the uterus firm in its normal position by pressure from without, while the ruptured wall and, in case of atony, the uterine cavity itself, are packed loosely with iodoform gauze, the vagina is also packed tight and a compressing bandage applied to the abdomen. This is what he calls "exact tamponing." Then saline infusion, ergot and analeptics are used as indicated and the woman is left quiet, to rest, with an ice-bag applied to the abdomen. All this has to be done on the spot, with no attempt to remove the patient. Any attempt at removal just before or after delivery is liable to influence the course of events most unfavorably. The woman is left undisturbed for two days at least, and if possible for a week, the tamponing being undisturbed during this interval unless interference is compelled by increasing or constantly high temperature. She is then removed to some institution for further care. The tampon is here removed and a glass drain introduced, replaced by a rubber drain after six or eight days. Cautious vaginal douches with an antiseptic solution and the necessary local and general measures are continued until the rupture has entirely healed. In case operative interference becomes necessary, partial or total hysterectomy is the rule.

Syphilis and Insanity.—A. J. Rosanoff and John I. Wiseman have tested the Wassermann and Noguchi reactions in a number of patients suffering from the different forms of insanity and report their results in the January issue of the *American Journal of Insanity*. They summarize on the basis of their results the relationship existing between syphilis and insanity as follows: "1. The regular absence of lymphocytosis, of the Wassermann reaction, and of the butyric acid reaction in psychoses with a basis of arteriosclerotic disease known to be the result of old syphilitic infection indicates that these conditions are to be regarded as sequelæ of syphilis, and that the syphilitic process itself is in cases of these conditions already extinct. 2. In general paresis either the Wassermann reaction or Noguchi's butyric-acid reaction is invariably found—and most frequently together; any doubt of the essential dependence of general paresis on syphilitic infection can no longer be entertained. 3. Inasmuch as the Wassermann reaction and the butyric-acid reaction seem to indicate syphilis only when it exists in an active or potentially active form, their regular occurrence in general paresis would tend to prove that that disease is a manifestation of active syphilis, of activity of the *Spirochæta pallida;* while the evidence for this view is not yet complete, it is sufficient to justify its being used as a basis of therapeutic essay. 4. In no other common psychosis does either the Wassermann reaction or the butyric-acid reaction occur with any regularity or even with special frequency; the relation of syphilis to these psychoses is that of a complication by accidental coincidence. 5. From the standpoint of diagnosis, cytologic examination of the cerebrospinal fluid is an indispensable aid in the practice of psychiatry; with the further aid of the Wassermann reaction and of Noguchi's butyric-acid reaction, the diagnosis of general paresis can be either established or excluded with practical certainty." The authors admit that the view that paresis is a manifestation of active syphilis cannot yet be considered as absolutely established, though the constant reactions to the Wassermann and Noguchi tests strongly point that way. The essential link in the chain of evidence—the finding of the spirochete—appears to be still lacking, and until that is supplied we shall still have to speak of parasyphilitic infection, whatever that may mean.

Peculiar Hereditary Anomaly of the Hair and Nails.—In 1894, C. Nicolle and A. Halipré described a peculiar condition of the hair and nails in a large number of the members of a certain family at Rouen. In the *Bulletin of the Society of Medicine of Rouen* for 1908, recently issued, A. Hebert and A. Halipré describe the case of a girl belonging to this family and give some details of the prevalence of the anomaly. The patient, who was a girl of 12, had always enjoyed good health and entered the hospital for impetigo of the face. In general, the examination revealed normal conditions except with reference to the hair and nails. The hairs of the eyebrow were very scanty and entirely colorless. The lashes were scanty and blond; the iris was blue. The skin of the forehead presented scanty downy hairs; the cheeks were absolutely smooth, but on the chin and upper lip were a few downy hairs. The hairs of the head were scanty, short, about 2 cm. (0.8 inch), very small and white; they pulled out very easily, even in tufts, without breaking. It was quite difficult to determine the line of implantation of the hair on the forehead where they could scarcely be differentiated from the down. On the temples the line of demarcation was plain. The hairs on the vertex and the part adjoining the forehead were thinner than on the rest of the scalp. The nucha and the parts above and behind the ear presented only scanty down. The scalp was white and of a uniform pigmentation. There was no development of hair on the rest of the body except some down on the pubis and the lower abdominal region. The terminal phalanges of the hands and feet were enlarged so as to appear clubbed; the nails were hypertrophied, much thicker than normal, smooth and friable at the end, where they were irregularly broken. Their free border was dark, irregularly striated and about 2 mm. thick. The rest of the nail was normally colored and the cutaneous fold around the nail. The occurrence of this peculiarity has been traced backward to the sixth generation and the anomaly appears to have originated at Rouen. Altogether among 80 known descendants 52 have been affected, 28 males and 24 females. So far the affection has never skipped a generation to appear in the following. In certain families all the members were attacked; in others the boys are exclusively the victims, the girls being normal; in still others one child of two or three was affected independent of sex. The heredity appears to be governed by no law. It is hard to say whether the lesion tends to disappear, for if it spares certain children of one branch of the family it attacks all of those of a neighboring branch. There is no ground for incriminating syphilis or leprosy and the etiology of the anomaly remains entirely unknown.

Industrial Diseases: "Let Us Open Our Eyes."—The second international congress for industrial diseases, which is to be held at Brussels, September 10 to 14 this year, is rousing the profession in Belgium to pay greater attention to occupational diseases. The *Gazette Médicale Belge,* in a recent editorial with the above title, *Ouvrons l'Oeil,* urges physicians to begin to collect data for this new science, especially those who have anything to do with patients suffering from industrial diseases. The physician is the expert and should be the leader in this phase of sociology; it is incumbent on him in particular, as his material interests are so directly involved. The social legislation in Belgium, as in Germany, was conceived and wrought out without the aid of the profession, although almost all the burdens of it is borne by medical men. It is for their direct material interests to make their influence felt in such questions, not to mention their scientific interest. Professional inertia and clinging to old routine have wrought dire trouble for the profession where this social legislation has been introduced. In this new science of industrial diseases physicians must take the lead in every line. "Zealous cooperation, careful study of individual cases, in local, state and international associations, and of all the questions involved in industrial diseases will not only serve the interests of the public, but will prevent physicians being made packhorses for the social legislation which seems to be looming up in every land."

Humbug Medicines.—With this title R. von Post publishes in a Swedish medical journal an appeal to all to refrain from prescribing or giving other countenance to the unnecessary and more or less fraudulent remedies which the manufacturers present for the approval of the profession. Even if it happens that one or the other of these proprietaries may possibly have some value, their price is generally out of all proportion to their usefulness or value; the harm they do outweighs any good. He pleads that the physician should not lend his name and his authority to support these commercial undertakings. The *Nordiskt medicinskt Arkiv* comments approvingly on his words, saying that it is the rare exception when a testimonal or other support from the individual physician of these proprietaries is useful or ethically correct. The really valuable remedies scarcely ever obtain recognition by way of display advertisements with testimonials from mostly obscure men. The physician, the editorial adds, acts best for his own reputation and for that of the profession at large and for the interests of the public by making it a principle to refrain from writing testimonials, and thus he will avoid being mixed up in this display advertisement business. Really good remedies do not need this advertising, and the bad and unnecessary ones should not get the support of the profession.

Society Proceedings

COMING MEETINGS

Alabama, Medical Association of State of, Mobile, April 19-22.
Am. Laryn., Rhin. and Otol. Society, Washington, D. C., April 28-30.
Arizona, Medical Association of, Phoenix, April 20-21.
California, Medical Society of State of, Sacramento, April 19-21.
Conf. State and Prov. Bds. of Health, Washington, April 28-29.
District of Columbia, Medical Association of, Washington, April 26.
Florida, Medical Association of, Jacksonville, April 6-8.
Georgia, Medical Association of, Athens, April 20-23.
Maryland, Med. and Chirurgical Faculty of, Baltimore, April 26-28.
Mississippi State Medical Association, Oxford, April 12.
South Carolina Medical Association, Laurens, April 19-21.
Tennessee State Medical Association, Memphis, April 12-14.

MEDICAL SOCIETY OF THE MISSOURI VALLEY

Twenty-second Semi-Annual Meeting, held at Omaha, March 17-18, 1910

The President, Dr. A. B. Somers, Omaha, in the Chair

Psychotherapy in Relation to the General Practice of Medicine and Surgery

Dr. Henry S. Munro, Omaha, discussed psychotherapy in the field of preventive medicine; in the domain of psychophysiologic therapeutics; as an adjunct in the treatment of acute diseases; as an aid to surgery in the treatment of chronic diseases, and in relation to the prevalent professional psychasthenia.

DISCUSSION

Dr. C. R. Woodson, St. Joseph, Mo.: The physician who possesses the power to entertain, to divert, and to inspire confidence, who can honestly set forth facts and take an individual's mind off of an object of worry, or who can influence him along these lines, is the best psychotherapist.

Dr. A. S. von Mansfelde, Ashland, Neb.: I do not believe that a man can be educated to become a successful psychotherapist. The successful psychotherapist is born, not made.

Dr. R. Willman, St. Joseph, Mo.: Instruction and investigation, if properly given and carried out, will do much toward mitigating and annihilating false mind-healing. Psychotherapy is not new, but physicians have not practiced it to the extent they should have done.

Dr. S. Grover Burnett, Kansas City, Mo.: Before attempting to administer psychotherapy, the physician ought to make a diagnosis. Without a diagnosis, he had better not say or do anything. If a physician has not diagnosed correctly the ailment of a patient, he is just as likely to give pathologic suggestions as he is to give physiologic ones. Babinski says that functional conditions, such as so-called hysteria, are caused by suggestion and relieved by persuasion. While all members of the profession are not ready to accept that statement, the more one studies it the more clearly he sees the basis for it.

Dr. O. Beverly Campbell, St. Joseph, Mo.: I do not believe that 75 per cent. of the people are neurasthenics. I have observed that as I am becoming a better diagnostician from day to day I am able to find pathologic conditions as causes in more cases of neurasthenia than I ever did before. I believe that confirmed neurasthenics need suggestion. They need to be told some things they do not know. If they are in fear of a great calamity, if they believe they are in a serious condition, and the physician can diagnose their cases correctly and say to them, you are not in a serious condition, then psychotherapy is of advantage.

Dr. F. B. Dorsey, Keokuk, Iowa: There is not a practitioner of medicine to-day who is not using psychotherapy to a greater or less degree, but there is a limitation to it. A short time ago I had a case of confirmed neurasthenia. A diagnosis of gall-bladder trouble was made, and the operation disclosed a gall-bladder full of stones. After these were removed the neurasthenia disappeared.

Dr. C. C. Goddard, Leavenworth, Kan.: The general practitioner chases dollars too hard to make accurate diagnoses. I find that when patients with neurasthenia are admitted into private institutions they have not been properly examined by the family physician. If they had been, the patients never would have been sent to such institutions, but treated at home. I think that pathologic conditions are at the bottom of the majority of cases of neurasthenia.

Dr. W. O. Henry, Omaha: The value of this paper lies in the fact that I emphasize the point that all physicians should employ psychotherapy. They should cultivate it as a means of diagnosis, but not to the exclusion of other things. Psychotherapy should be taught in medical schools. I believe that more attention will be given to it in the future than there has been in the past.

The Errors of Mind Healing

Dr. R. Willman, St. Joseph, Mo.: The various healing cults are a danger to the human family. The dangers that follow in the trail of the pernicious practices of the healing cults may be summed up as follows: 1. The mind-healer being a non-believer in the existence of disease, its contagion, infection, etc., does not appreciate the necessity of knowing disease, and because of his unmindfulness of the danger of contaminating others, he leaves all gates open to the spread of disease. 2. The mind-healer has no idea of early diagnosis and proper treatment of disease when it is in its incipiency. Thus the patient is deprived of all opportunity to protect himself from danger and loss of life—things which early diagnosis and proper treatment could easily prevent.

Hemiplegia

Dr. F. E. Coulter, Omaha, read a paper in which he reported a case of hemiplegia with acute onset. He also exhibited the patient. He called attention to the salient points of practical importance in the management of such cases.

DISCUSSION

Dr. R. C. Woodson, St. Joseph, Mo.: The mode of onset of lesions of the central nervous system is of more importance to the physician in making a diagnosis than anything else.

The Non-Surgical Treatment of Tuberculous Arthritis

Dr. H. Winnett Orr, Lincoln, Neb.: Many patients who have old tuberculous sinuses would recover without operation in from six months to a year if carefully treated mechanically. Operative interference, even under the best conditions, prepares the way for mixed infection later.

DISCUSSION

Dr. H. P. Hamilton, Omaha: Methods of extension and fixation are to be commended. If the disease begins in the epiphysis a different method of treatment than extension and fixation will be required. The important thing is to make the diagnosis early while the disease is in the epiphysis only. Usually, when the orthopedic surgeon gets the case, rupture has taken place into the joint, the ligaments and synovial membranes having already become involved in the inflammatory process, and then it is, and then only, the orthopedic surgeon should come in with fixation.

Dr. A. S. von Mansfelde, Ashland, Nebr.: In order to be successful in these cases the surgeon should be a master in the use of plaster of Paris. He should also have a thorough knowledge of the action of the muscles.

The Neglect of the Sacroiliac Joint by the General Practitioner

Dr. Edward Evans, LaCrosse, Wis., emphasized the anatomic importance of the sacroiliac joint, saying that its neglect in the diagnosis of painful and disabling conditions about the back and pelvis leads to improper treatment. He cited illustrative cases, and described the symptoms of strain of this joint, and then discussed the diagnosis and treatment.

DISCUSSION

Dr. A. S. von Mansfelde, Ashland, Nebr.: Men in throwing sacks of grain over their shoulders sometimes produce a partial dislocation of the sacroiliac joint which continues for years and is referred to as chronic nephritis, lumbago, or chronic rheumatism, when in reality nothing more than the dislocation of this joint, complete or partial, is the cause of the trouble.

Dr. H. Winnett Orr, Lincoln: I have seen two cases in which the sacroiliac joint has been strained in the manner described by Dr. Evans.

Dr. S. Grover Burnett: A lawyer sustained an injury in leaping from a street car. The hip-joint seemed normal, but when any force was brought to bear on the pelvis, pain was intense along the sacroiliac joint.

Dr. F. B. Dorsey: A pregnant woman sustained a complete disarticulation at the symphysis and the right sacroiliac synchondrosis. Treatment consisted in placing her in the dorsal position and applying a plaster cast from a little above the waist-line down to and below the knee, immobilizing the knee and the hip. She made a perfect recovery.

Dr. Mary Strong, Omaha: Is the Walcher position, which is frequently used in cases of slight degree of contraction of the pelvic inlet, likely to injure the sacroiliac joint?

Dr. Edward Evans, LaCrosse, Wis.: If a patient be put in the Walcher position, high forceps applied, and the sacroiliac joint strained, one takes care of it afterward, but these slight strains, as a rule, are not cared for by practitioners.

Facts in Ophthalmology of Practical Importance to the General Practitioner

Dr. John Monroe Banister, Omaha: It would be most advantageous to the busy medical practitioner in general practice to possess sufficient ophthalmologic knowledge to recognize the ocular conditions demanding immediate attention, and to acquire the small amount of skill necessary to give palliative treatment of such urgent affections until the services of a specialist can be secured.

DISCUSSION

Dr. A. S. von Mansfelde, Ashland, Nebr.: Eyes have been lost because the general practitioner has not realized the importance of an injury to the eye at the time the case was seen, and more knowledge on his part would have enabled him to deal with such cases successfully.

Dr. B. W. Christie, Omaha.: Medical colleges should not graduate students without giving them an intelligent idea of the use of the ophthalmoscope. They also should be taught how to refract.

Antitetanic Serum in Tetanus

Dr. F. B. Dorsey, Keokuk, Iowa, emphasized the necessity of giving repeated doses of this serum at stated intervals as a prophylactic. Large and repeated doses do not always counteract tetanus when it is once established. He reported five cases.

DISCUSSION

Dr. C. C. Goddard: If there is any virtue in antitetanic serum, it must be used early or not at all. One remedy I am going to try and use it to the limit is apomorphin, as I believe we will get more benefit from it than from chloral.

Dr. R. Willman mentioned a case of tetanus in which he used apomorphin, as well as sulphate of magnesia and sulphate of soda combined, with gratifying results.

Dr. O. Beverly Campbell said that sulphate of magnesia and sulphate of soda are good in their place, but when tetanus is fully developed he would just as soon use Missouri River water. He has never seen a case of true tetanus cured by any method of treatment.

(*To be continued*)

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

DIVISION OF FEES

To the Editor:—Please tell me where I can obtain literature on the subject of division of fees. D. A. Webb, Scranton, Pa.

ANSWER.—A list of literature on this subject was published in this department, Dec. 18, 1909, p. 2117.

WEIGHT OF ASHES AFTER CREMATION OF BODY

To the Editor:—Can you inform me what percentage of the weight should remain after cremation of a human body in one of the up-to-date crematories? Cortlandt D. Field, New York.

ANSWER.—It is learned from the superintendent of a crematory in Chicago that the average weight of ashes from a human body is five pounds. This would be between three and four per cent. of the body weight.

The Public Service

Medical Department of the Army

Changes for the week ended March 19, 1910:

Wadhams, Sanford H., major, ordered on expiration of leave of absence to proceed to Fort Slocum, N. Y., for duty.

Howell, Walter O., 1st lieut., M. R. C., ordered to proceed to Presidio of San Francisco, for duty.

McAndrew, P. H., major, relieved from duty at Fort Mackenzie, Wyo., and ordered to Fort Terry, N. Y., for duty.

Robbins, Chandler P., major, relieved from duty at Fort Terry, N. Y., and ordered to Fort McHenry, Md., for duty.

Shaw, Herbert G., capt., ordered to report on April 25, to Lieut. Col. James G. Glennan, Medical Corps, President of examining board, Army General Hospital, San Francisco, for examination for promotion.

Hall, James F., capt, relieved from duty at Fort Brady, Mich., at expiration of his present leave of absence, and will proceed to Chicago, for duty as attending surgeon in that city.

Humphreys, Harry G., capt., granted 30 days' leave of absence about April 1, 1910.

Mills, Raymond W., 1st lieut., M. R. C., ordered to Fort Ethan Allen, Vt., for duty.

Kerr, James D., 1st lieut., M. R. C., ordered to Fort Howard, Md., for duty.

Winter, Francis A., major, ordered to proceed to New York City, on official business pertaining to the Medical Department.

McMillan, C. W., 1st lieut., M. R. C., leave of absence extended 1 month.

The following named officers of the Medical Corps will report in person on the dates set opposite their respective names to Lieut. Col. Henry P. Birmingham, Medical Corps, president examining board, at the Army Medical Museum Building, Washington, D. C., for examination to determine their fitness for promotion: Captain Paul S. Halloran, June 6, 1910; Captain Peter C. Field, June 6, 1910; 1st Lieut. Henry C. Pillsbury, May 16, 1910; 1st Lieut. Ray W. Bryan, May 16, 1910; 1st Lieut. Bernard S. Gostin, May 16.

Sparrenberger, F. H., 1st lieut., M. R. C., granted leave of absence for 1 month, to take effect April 30, 1910.

The following named officers of the Medical Corps will report in person on the dates set opposite their respective names to Lieut. Col. James D. Glennan, Medical Corps, president of the examining board, at the Army General Hospital, San Francisco, for examination to determine their fintness for promotion: Captain Louis Brechemin, Jr., June 6, 1910; 1st Lieut. Frederick S. Macy, May 16, 1910; 1st Lieut. Guy V. Rukke, May 16, 1910; 1st Lieut. Edgar King, May 16, 1910; 1st Lieut. Howard H. Johnson, May 16, 1910; 1st Lieut. William H. Richardson, May 16, 1910.

Robinson, James L., 1st Lieut., M. R. C., ordered to report to the commanding officer, Fort Worden, Wash., for duty.

DeNancrede, Charles B. G., 1st lieut., M. R. C., ordered to active duty and will repair to this city to deliver lectures to the class at the Army Medical School on Monday, April 11 and 14, 1910; on the completion of this duty will return to his home, Ann Arbor, Mich.

Medical Corps of the Navy

Changes for the week ended March 19, 1910:

Wise, J. C., med. director, detached from duty as president and member of the naval examining and naval medical examining boards, Washington, D. C., and ordered to continue other duties.

Ames, H. E., med. director, ordered to command the Naval Hospital, Puget Sound, Wash.

Anderson, F., med. director, detached from command of the Naval Hospital, Annapolis, Md., and ordered to duty as a member of the Naval examining and naval medical examining boards, Washington, D. C.

Beyer, H. G., med. inspector, detached from the Bureau of Medicine and Surgery, and ordered to continue other duties.

McDonald, P. E., P. A. surgeon, placed on the retired list March 9.

Eaton, W. E., acting asst.-surgeon, ordered to duty at the Naval Hospital, Boston.

Langhorne, C. D., surgeon, detached from the Naval Station, Hawaii, and ordered home to wait orders.

Brownell, C. D. W., surgeon, ordered to the *New Jersey*.

Stuart, A., P. A. surgeon, detached from the *New Jersey*, and ordered to the Naval Medical School, Washington, D. C., for course of instruction.

Hermesch, H. R., asst.-surgeon, detached from the Naval Training Station, San Francisco, and ordered to the *South Dakota*.

Bacon, S., asst.-surgeon, detached from the *South Dakota,* and ordered to the Naval Training Station, San Francisco.

Rossiter, P. S., surgeon, detached from the Naval Station, Tutuila, Samoa, and ordered home to wait orders.

Cottle, C. F., asst.-surgeon, detached from the Naval Hospital, Annapolis, Md., and ordered to duty at the Naval Station, Tutuila, Samoa.

Strite, C. E., P. A. surgeon, detached from the *Franklin*, and ordered to the Naval Hospital, Las Animas, for treatment.

Public Health and Marine-Hospital Service

Changes for the week ended March 16, 1910:

Trask, J. W., asst. surgeon-general, granted 1 month's leave of absence from March 16, 1910.

Carter, H. R., surgeon, granted 1 month's leave of absence from March 11, 1910, on account of sickness.

Lavinder, C. H., P. A. surgeon, directed to proceed to certain places in Germany, for inspection of antitoxin establishments, and on completion of said duty to proceed to Milan and other places in Italy, for investigation of pellagra.

King, W. W., P. A. surgeon, granted 7 days' leave of absence en route to station.

Warren, B. S., P. A. surgeon, detailed to represent the Service at the National Conference on the Education of Dependent, Backward, Truant and Delinquent Children, to be held in St. Louis, May 16-19, 1910.

Stimson, A. M., P. A. surgeon, granted 6 days' leave of absence from March 14, 1910, under paragraph 191, Service Regulations.

Creel, R. H., P. A. surgeon, granted 5 days' leave of absence from March 18, 1910.

Spratt, R. D., P. A. surgeon, granted 15 days' leave of absence en route to station.

Turnipseed, David C., asst.-surgeon, directed to proceed to Baltimore, and report to the Medical Officer in Command for duty and assignment to quarters.

Stiles, C. W., chief, Division of Zoology, Hygienic Laboratory, detailed to represent the Service at the annual conference of state health officers, to be held in Nashville, Tenn., April 6-7, 1910, and the annual meeting of the Tennessee State Medical Association, to be held in Memphis, April 12-14, 1910.

Bean, L. C., acting asst.-surgeon, granted 5 days' leave of absence from March 14, 1910.

DeForest, C. M., acting asst.-surgeon, granted 20 days' leave or absence from April 13, 1910.

Marsh, W. H., acting asst.-surgeon, granted 4 days' leave of absence from March 19, 1910.

Turnipseed, David C., commissioned as Assistant Surgeon in the Public Health and Marine-Hospital Service.

Marriages

James C. Blair, M.D., to Miss Vivian Losse, both of San Jose, Cal., March 8.

Oscar J. Mayer, M.D., Mexico, to Miss Lucy Keller, at San Antonio, Tex., March 5.

Philip August Bill, M.D., to Miss Mary Aileen Ross, both of San Francisco, March 9.

Arthur A. O'Neill, M.D., to Miss Stella L. Montague, both of San Francisco, March 3.

Samuel Schiffman, M.D., to Miss Charlotte Kleinberg, both of New York City, March 6.

James Thomas Nichols, M.D., Muskogee, Okla., to Miss Louise Salisbury, at Baltimore, March 9.

Albert Seward Tenney, M.D., Cambridge, Mass., to Miss Helen L. Fargo Schulte, of South Orange, N. J., January 8.

William John Judy, M.D., Kerens, W. Va., to Miss Jessie Harper Wamsley, of Mill Creek, W. Va., at Cumberland, Md., March 8.

Deaths

Wharton Sinkler, M.D., died at his home in Philadelphia, March 16, aged 64. He was born in Philadelphia, Aug. 7, 1845, received his early education in Gambier, Ohio, and Aiken, S. C., and entered the South Carolina college, but left in his Freshman year, at the outbreak of the Civil War and enlisted in the Second South Carolina Cavalry, C. S. A. At the conclusion of the war he attended lectures in Philadelphia, was graduated in medicine from the University of Pennsylvania in 1868, and continued to practice in Philadelphia until his death. He was a member of the American Medical Association, chairman of the Section on Nervous and Mental Diseases in 1905, and chairman of the executive committee of the section in 1908 and 1909. He was also a member and formerly president of the American Neurological Association, and the Philadelphia Neurological Society; treasurer of the Society of Tropical Medicine; a fellow of the College of Physicians of Philadelphia, the Association of American Physicians, and American Philosophical Society; a member of the National Association for the Study and Care of Epileptics and many other scientific societies. He was trustee of the University of Pennsylvania, manager of the Episcopal Hospital, manager of the University of Pennsylvania Hospital, and attending physician to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases. In 1895 he was one of those responsible for the creation of the Pennsylvania Epileptic Colony Farm, which, on May 2, 1896, was merged with the St. Clement's Hospital for Epileptics, under the title of the Pennsylvania Epileptic Hospital and Colony Farm. Since that time he has served as president of the institution, and as a result of his solicitation a large part of the building fund and endowment was secured. This was the first colony for epileptics to be founded in the state of Pennsylvania and the third in the United States. It is felt by Dr. Sinkler's family and friends that no more fitting memorial could exist for him than this institution which gives noble relief to those unfortunates who cannot be cared for in other institutions or in their homes. He was a frequent contributor to the literature of his specialty.

Frank V. Cantwell, M.D. University of Pennsylvania, 1884; a member of the American Medical Association; chief of the surgical staff of St. Francis Hospital, Trenton, N. J.; a member of the Trenton Board of Health and a common councilor of Trenton; local pension examiner; consulting physician at the State Prison; sometime president of the Mercer County Society, Trenton Medical Association, and Trenton Medical Library Association; at one time physician of Mercer county; one of the leaders in the antituberculosis agitation which resulted in the establishment of the State Sanatorium for Tuberculosis, Glen Gardener; died at his home March 11, from tuberculosis, aged 48.

Mathias Cook, M.D. Starling Medical College, Columbus, 1864; a member of the Medical Society of the State of New York; acting assistant surgeon U. S. Army and afterward surgeon of the Second Ohio Volunteer Cavalry during the Civil War, and volunteer surgeon in the German service during the Franco-German War; a ward physician of Utica for 25 years; one of the original members of the staff of St. Elizabeth's Hospital; for more than ten years local pension examiner, and for most of that time president of the board; in 1889, one of the coroners of Oneida county; a philatelist of national repute; died at his home, March 7, from heart disease, aged 69.

Homer Orman Bates, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878; of Chicago; a member of the American Medical Association; formerly an instructor in Rush Medical College; professor of obstetrics in the Playfair-Lying-In Hospital; attending physician at Grace Hospital; and a lecturer in the Presbyterian Hospital School for Nurses; surgeon for the Metropolitan Elevated Railroad; formerly president and councilor of the Long Beach Branch of the Los Angeles County Medical Society; died at his home in Sierra Madre, March 10, from cerebral hemorrhage, aged 63.

Nelson Barrere Van Winkle, M.D. Miami Medical College, Cincinnati, 1878; a member of the American Medical Association; for many years a member of the board of pension examiners of Blanchester, Ohio; local surgeon for the Baltimore and Ohio Railroad; and a member of the Baltimore and Ohio Surgeons' Association since its organization; died at his home in Blanchester, March 13, from cerebral hemorrhage, aged 57.

Harrison Tyler Witman, M.D. Jefferson Medical College, 1864; assistant surgeon of the Forty-second Pennsylvania Volunteer Infantry and brevetted major and surgeon for conspicuous bravery on the field; and later surgeon of the One Hundred and Ninety-fifth Pennsylvania Volunteer Infantry; a member of the common council of Reading, Pa.; died at his home, March 6, from pneumonia, aged 72.

William Merrick Gray, M.D. University of Pennsylvania, 1882; pathologist to the Army Medical Museum, and to the Providence Hospital, Washington; an expert in *x*-ray photography; during the Spanish-American War, a member of the staff of the Hospital Ship *Relief;* died March 9 in the laboratory of the Army Medical Museum, from acute dilatation of the heart, aged 51.

Rollin Carolus Olin, M.D. University of Michigan Homeopathic College, Ann Arbor, 1877; professor of practice of medicine in Detroit Homeopathic College; and a member of the medical board of Grace Hospital; a veteran of the Civil War; died at his home, March 8, from cerebral hemorrhage, aged 70.

Charles Auville Board, M.D. University of Virginia, Charlottesville; for more than fifty years a practitioner of Virginia; surgeon in the Confederate Army during the Civil War; for several terms mayor and school trustee of Bedford City; died at his home, February 26, from senile debility, aged 77.

Robert George English, M.D. Northwestern University Medical School, Chicago, 1871; a veteran of the Sabine Indian War; and a pioneer resident of Des Moines, Iowa; for nearly sixty years a practitioner; died at the home of his daughter in Osawatomie, Kan., March 4, from senile debility, aged 92.

John J. Saville, M.D. University of Pennsylvania, 1862; of Chicago; a pioneer practitioner of Sioux City, Iowa; in 1874 made agent of the Rosebud Indian Reservation, S. D.; surgeon of volunteers during the Civil War; and at one time health officer in Omaha; died in that city, March 8, aged 76.

Victor Hugo Sturm, of Traverse City, Mich., a member of the local medical society; president of the Grand Traverse Hospital Association; for many years a practitioner of Cincinnati; died suddenly in Mason City, Iowa, Dec. 8, 1909; from acute dilatation of the heart, aged 76.

Charles Coleman Benson, M.D. University of Maryland, Baltimore, 1883; formerly of Baltimore and Santa Cruz, Cal.; died in his rooms in Philadelphia, March 12, from the effects of poison, believed to have been self-administered with suicidal intent, while despondent, aged 73.

Charles Seaton, M.D. Kentucky School of Medicine, Louisville, 1860; a veteran of the Civil War; from 1882 to 1886, treasurer of Morgan county, Ind.; for several years, manager of sanatoria in Martinsville; died in his office in that city, March 11, from heart disease, aged 74.

John Nevins, M.D. New York University, New York City, 1883; a member and for several terms secretary and treasurer of the Jersey Shore (Pa.) School Board; a member of the Lycoming County Medical Society; died at his home, March 2, from pneumonia, aged 56.

Hallie Thomas Willis, M.D. University Medical College of Kansas City, Mo., 1898; a member of the Missouri State Medical Association; and for many years secretary of the Shelby County Medical Society; died at his home in Shelbina, February 25, from nephritis, aged 46.

Joseph H. Green, M.D. Southern Medical College, Atlanta, Ga., 1881; for several years a member of the faculty of a medical school of Atlanta; and formerly physician of DeKalb county, Ga.; died at his home in Decatur, March 11, from pneumonia, aged 50.

Daniel B. D. Beaver, M.D. University of Pennsylvania, 1871; a member of the American Medical Association; of Reading, Pa.; for several years chief of the surgical staff of St. Joseph's Hospital; died in Okahumpka, Fla., March 6, from tuberculosis, aged 63.

John Frederick Brown, M.D. University of Arkansas, Little Rock, 1891; a member of the Arkansas Medical Society; once president of the Faulkner County Medical Society; died at his home in Conway, March 5, from pneumonia, aged 39.

Daniel Townsend Pope, M.D. Medical College of the State of South Carolina, 1860; surgeon in the Confederate Service during the Civil War; died at his home in Edisto Island, S. C., Dec. 8, 1909, from cerebral hemorrhage, aged 72.

Thomas Milsom, M.D. Harvard Medical School, 1870; for several years surgeon on the Inman Line; a member of the Nova Scotia Medical Association; died at his home in Dartmouth, July 25, 1909, from pneumonia, aged 66.

Isaac Watson Inlow (license, Ind., 1897); a member of the Indiana State Medical Association; for forty years a practitioner of Shelby county; died at his home in Blue Ridge, March 7, from cerebral hemorrhage, aged 70.

Martin Amador, M.D. New York University, New York City, 1878; a member of the Medical Society of the State of New York and Associated Physicians of Long Island; died at his home in Brooklyn, March 15, aged 53.

Samuel Clark Way, M.D. Ohio Eclectic Medical College, Cincinnati, 1866; a veteran of the Civil War; of Johnson City, Tenn.; died in the National Soldiers' Home in that city, February 4, from senile debility, aged 79.

Charles B. Richards, M.D. Western Reserve University, Cleveland, 1852; of Binghampton, N. Y.; surgeon of volunteers during the Civil War; died in St. Petersburg, Fla., March 6, from bronchitis, aged 78.

Bernard Sheridan Kerr, M.D. Victoria College, Coburg, Ont., 1867; a member of the College of Physicians and Surgeons of Ontario, 1869; died at his home in Toronto, March 12, from bronchopneumonia, aged 73.

Thomas Joseph Broderick, M.D. Harvard Medical School, 1882; formerly a member of the Massachusetts Medical Society; died at his home in Charlestown, Boston, March 5, from cerebral hemorrhage.

Henry B. Day, M.D. University of Oregon, Portland, 1905; formerly of Dayton, Wash.; died at his home in Tacoma, Wash., Dec. 6, 1909, from the effects of an overdose of chloroform, aged 25.

Daniel Edmond Barry, M.D. College of Physicians and Surgeons, New York City, 1871; a member of the American Medical Association; died at his home in New York City, March 12, aged 60.

Ulysses S. Ingram, M.D. Hospital College of Medicine, Louisville, 1896; of Pineville, Ky.; died in a sanitarium in Louisville, March 11, from typhoid fever, following pneumonia, aged 35.

William Frederick Knapp, M.D. University of Michigan, Ann Arbor, 1878; of Monroe, Mich.; died in St. Joseph's Retreat, Dearborn, Mich., March 10, from cerebral hemorrhage, aged 60.

Benjamin H. Leslie, M.D. University of Pennsylvania, 1868; a member of the Kansas Medical Society; died at his home in Lawrence, Kan., March 15, from chronic nephritis, aged 66.

Alfred Augustus Stocker, M.D. Harvard Medical School, Boston, 1853; a surgeon of volunteers during the Civil War; died at his home in Cambridge, Mass., March 10, aged 90.

Frank W. Nelson, M.D. Jefferson Medical College, 1880; a member of the Medical Society of Virginia; died at his home in Forest Depot, March 8, from heart disease, aged 54.

Charles W. Hayes, M.D. Cleveland University of Medicine and Surgery, 1871; of Omaha; died in a hospital in Los Angeles, Cal., March 7, from heart disease, aged 63.

Henry H. Bartlett, M.D. Cleveland Homeopathic Medical College, 1869; formerly of Ashtabula, Ohio, and Los Alamitos, Cal.; died suddenly in Pasadena, May 3, 1909.

Samuel Holman, **M.D.** Bellevue Medical College, 1866; a member of the Medical Society of the State of New York; died at his home in Hilton, March 4, aged 68.

Robert L. Thompson, M.D. College of Physicians and Surgeons, Baltimore, 1891; died at his home in Traphill, N. C., February 20, from pneumonia, aged 50.

William N. Cronin, M.D. Starling Medical College, Columbus, Ohio, 1887; died at his home in Hartford City, Ind., March 9, from heart disease, aged 47.

Jesse Snowden, M.D. Central College of Physicians and Surgeons, Indianapolis, 1883; died at his home in Indianapolis, March 8, from heart disease, aged 75.

Oliver Richardson King, M.D. College of Physicians and Surgeons, New York City, 1852; died at his home in Plainfield, N. J., March 13, from heart disease.

William Hawtry Bredin, M.D. Trinity Medical College, Toronto, 1869; formerly of Picton, Ont.; died at his home in Toronto, Nov. 11, 1909, aged 81.

William Penn Dicks, M.D. Washington University, Baltimore, 1875; died at his home in Walkertown, N. C., February 18, from neurasthenia, aged 71.

D. W. Cooper, M.D. Physio-Medical College, Cincinnati, 1879; died at the home of his daughter in Oakdale, Tenn., March 7, from paralysis, aged 60.

Edward Louis Menager, M.D. University of Rennes, France, 1869; died at his home in Spokane, Wash., March 9, from tuberculosis, aged 57.

John S. Marshall, M.D. Medical College of Virginia, Richmond, 1888; died recently at his home in Smithfield, Va., and was buried March 7.

William Diehl, M.D. New York Homeopathic Medical College, New York City, 1891; died at his home in Brooklyn, March 7, aged 47.

Pleasant W. McKeel, M.D. Vanderbilt University, Nashville, 1878; died at his home in Mayfield, Ky., March 9, from pneumonia, aged 57.

Nathan J. Langston, M.D. Southern Medical College, Atlanta, Ga., 1894; died at his home in McDonough, Ga., March 6, aged 65.

W. T. Stone, M.D. Memphis (Tenn.) Medical College, 1858; died at his home in Milan, Tenn., February 28, from influenza, aged 81.

Mikhail Farag, M.D. College of Physicians and Surgeons, Baltimore, 1907; died recently at his home in Tanta, Egypt.

Charles S. Kerr, M.D. University of Maryland, Baltimore, 1868; died at his home in Kerr, N. C., March 6, aged 65.

Albert G. DuPuy, M.D. Tulane University, 1878; died at his home in Tennessee Colony, Texas, March 11.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arizona: Phoenix, April 4-5. Sec., Dr. Ancil Martin.
California: San Francisco, April 5. Sec., Dr. Charles L. Tisdale, 929 Butler Building.
Colorado: Denver, April 5. Sec., Dr. S. D. VanMeter, 1723 Tremont Place.
Florida: Jacksonville, April 4-5. Sec., Dr. J. D. Fernandez.
Idaho: Boise, April 5. Sec., Dr. O. J. Allen, Bellevue.
Illinois: Chicago, April 14-16. Sec., Dr. J. A. Egan, Springfield.
Minnesota: State University, Minneapolis, April 5. Sec., Dr. W. S. Fullerton, 214 American Nat'l Bank Bldg., St. Paul.
Montana: The Capitol, Helena, April 5. Sec., Dr. W. C. Riddell.
New Mexico: Santa Fe, April 11-12. Sec., Dr. J. A. Massie.
North Dakota: Grand Forks, April 1-4. Sec., Dr. H. M. Wheeler.
Oklahoma: Ione Hotel, Guthrie, April 12. Sec., Dr. Frank P. Davis, Enid.
Rhode Island: State House, Providence, April 7-8. Sec., Dr. Gardner T. Swarts, Room 315, State House.
West Virginia: Wheeling, April 12-14. Sec., Dr. H. A. Barbee, Point Pleasant.

Washington July Report

Dr. J. Clinton McFadden, secretary of the Board of Medical Examiners of the State of Washington, reports the written examination held at Seattle, July 6-8, 1909. The number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 60 in each branch. The total number of candidates examined was 296, of whom 262 passed, including 186 osteopaths, and 34 failed, including 3 osteopaths. The following colleges were represented:

College	Year Grad.	Total No. Examined.
PASSED		
University of California ....(1896) (1907)	(1908)	3
College of Phys. and Surg., San Francisco....	(1909)	1
Cooper Medical College ....(1906)	(2, 1909)	3
Denver College of Medicine	(1899)	1
Georgetown University	(1907)	1
Atlanta College of Physicians and Surgeons.....	(1899)	1
Hahnemann Med. Coll. and Hospital, Chicago..	(1873)	1
Northwestern University Med. School..(1903) (1904) ....(1907) (1908)	(1909)	5
Bennett Medical College	(1891)	1
Rush Medical College....(1901) (1902) (1903) (1904) ....(1907)	(1909)	6
University of Iowa, College of Medicine..(1908)	(1909)	2
University of Louisville..........................	(1908)	1
University of Maryland	(1898)	1
Johns Hopkins University Medical School......	(1905)	1
Harvard Medical School..........................	(1906)	1
Tufts College Medical School.....................	(1908)	1
University of Michigan, College of Medicine..(1887) ....(2, 1902) (1908)	(2, 1909)	6
Saginaw Valley Medical College..................	(1899)	1
Hamline University	(1908)	1
University Med. College, Kansas City...(1901)	(1909)	2
Kansas City Hahnemann Medical College......	(1908)	1
Creighton Medical College...(1900) (1905)	(2, 1909)	4
University of Buffalo	(1894)	1
Cleveland Homeopathic Medical College.......	(1906)	1
Cincinnati College of Medicine and Surgery.....	(1892)	1
Pulte Medical College	(1883)	1
Willamette University ....(1906)	(1909)	2
University of Oregon ....(1897)	(1909)	2
Jefferson Medical College..............(1907)	(1909)	2
Woman's Medical College of Pennsylvania.....	(1894)	1
Medico-Chirurgical College, Philadelphia.......	(1896)	1
University of Pennsylvania...(1897) (1908)	(2, 1909)	4
Western Pennsylvania Medical College.........	(1894)	1
University of Tennessee	(1893)	1
University of Vermont	(1899)	1
Wisconsin College of Physicians and Surgeons..	(1908)	1
Marquette University, Milwaukee...............	(1909)	1
McGill University, Quebec......(1902) (1907)	(1908)	3
Univ. of Toronto, Ontario...(1905) (2, 1907)	(1908)	4
University of Munich, Germany.................	(1904)	1
Queen's University, Kingston, Ontario..(1900)	(1901)	2
FAILED		
Denver College of Physicians and Surgeons.....	(1909)	1
College of Physicians and Surg., San Francisco..	(1907)	1
College of Medicine and Surgery, Chicago......	(1903)	1
Jenner Medical College............................	(1906)	1
Hospital College of Medicine, Louisville.......	(1905)	1
Northwestern University Medical School......	(1903)	1
Rush Medical College	(1895)	1
Chicago College of Medicine and Surgery......	(1906)	1
College of Physicians and Surgeons, Chicago..	(2, 1909)	2
University of Iowa, College of Medicine.......	(1904)	1
Keokuk Medical College	(1900)	1
Kansas Medical College..........................	(1906)	1
Tufts College Medical School....................	(1905)	1
Harvard Medical School	(1908)	1
Baltimore Medical College.......................	(1899)	1
Michigan College of Medicine and Surgery....	(1905)	1
Detroit Homeopathic College....................	(1906)	1
Detroit College of Medicine......................	(1907)	1
University of Michigan, College of Med...(1883)	(1900)	2
University of Minnesota..........................	(1906)	1
Marion-Sims College of Medicine...............	(1897)	1
Kansas City Homeopathic Medical College.....	(1896)	1
Ensworth Central Medical College..............	(1906)	1
St. Louis College of Physicians and Surgeons..	(1896)	1
Jefferson Medical College........................	(1909)	1
University and Bellevue Hospital Medical Coll..	(1899)	1
Vanderbilt University	(1908)	1
Williamette University	(1903)	1
University of Manitoba, Winnipeg.............	(1898)	1

Oklahoma October Report

Dr. Frank P. Davis, secretary of the Oklahoma State Board of Medical Examiners, reports the written examination held at Guthrie, Oct. 12-15, 1909. The number of subjects examined in was 22; *total number of questions asked, 150;* percentage required to pass, 70. The total number of candidates examined was 32, of whom 19 passed, including one osteopath and 13 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Northwestern University Medical School.........	(1909)	77
University of Louisville..............(1908) 75;	(1909)	75
Tulane University of Louisiana..................	(1909)	78
Maryland Medical College........................	(1905)	76
Ensworth Medical College........................	(1909)	78
St. Louis College of Physicians and Surgeons...	(1909)	75
Marion-Sims College of Medicine...............	(1899)	81
Bellevue Hospital Medical College...............	(1896)	86
Albany Medical College	(1909)	81
Medical College of Ohio..........................	(1889)	74
University of Nashville.............(1908) 86;	(1909)	73
Vanderbilt University	(1909)	83
Knoxville Medical College........................	(1908)	75
Meharry Medical College	(1901)	83
University of Texas	(1909)	84
University of Virginia	(1909)	78
FAILED		
College of Physicians and Surgeons, Little Rock...	(1909)	63
University of Arkansas	(1892)	*60
Chicago College of Medicine and Surgery.........	(1908)	†68
Keokuk Med. College, College of Phys. and Surg..	(1901)	69
University of Louisville	(1894)	44
University of Missouri	(1880)	*68
Beaumont Hospital Medical College...(1890) *72;	(1900)	**57
St. Louis University	(1908)	**75
St. Louis College of Physicians and Surgeons.....	(1896)	*70
Leonard School of Medicine......................	(1909)	*74
Meharry Medical College	(1908)	69
University of Texas	(1896)	*78

* Fell below 50 per cent. in one or more branches.
** Second examination.
† Third examination.

Ohio December Report

Dr. George H. Matson, secretary of the State Medical Board of Ohio, reports the written examination held at Columbus, Dec. 7-9, 1909. The number of subjects examined in was 10; *total number of questions asked, 100; percentage required to* pass, 75. The total number of candidates examined was 25, of whom 22 passed and 3 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Georgetown University, Washington, D. C.......	(1906)	77.7
Indiana University	(1909)	82.1
Physio-Medical College of Indiana...............	(1908)	78.5
University of Kansas	(1908)	82.2
Hospital College of Medicine, Louisville..........	(1902)	85.1
Kentucky School of Medicine.....................	(1907)	78.2
Tulane University of Louisiana...................	(1909)	86.6
Harvard Medical School	(1905)	87.2
Columbia University, Coll. of Phys. and Surg.....	(1898)	90.2
Toledo Medical College..........................	(1909)	76.7, 77.2, 83.1
Starling-Ohio Medical College....................	(1909)	76.3
Starling Medical College..........................	(1901)	*
Miami Medical College	(1909)	77.8, 81.1, 82.6
University of Pennsylvania......................	(1897)	87.3
Jefferson Medical Coll..(1875) 78.9; (1908) 86.1;	(1909)	87.8
Western University, London, Ontario	(1909)	77.2
FAILED		
Eclectic Medical Institute	(1909)	**70
Starling-Ohio Medical College....................	(1909)	**73.5
Meharry Medical College.........................	(1908)	†69.3

* No grade given.
** Second examination.
† Fourth examination.

Rhode Island January Report

Through an error, the wrong percentage figures were given in The Journal of Feb. 26, 1910, for the candidates who passed the examination held by the Rhode Island State Board of Health, Jan. 7-8, 1910. The correct figures are as follows:

College	Year Grad.	Per Cent.
PASSED		
College of Physicians and Surgeons, Baltimore....	(1903)	86.6
Harvard Medical School	(1907)	83.6
Dartmouth Medical School	(1908)	80
University of Vermont...........................	(1909)	80
FAILED		
Baltimore Medical School........................	(1907)	71.4
Atlantic Medical College, Baltimore.............	(1909)	61.9
Boston University	(1899)	63.4
Laval University, Canada...........(1904) 61.4;	(1909)	67.9

Book Notices

La Cure Radicale de la Hernie Inguinale: Leçons professees à l'Hôtel-Dieu. Par le Docteur Lucas-Championnière, Chirurgien Honoraire de L'Hôtel-Dieu, Membre de l'Académie de Médecine. Paper. Pp. 192, with 53 illustrations. Price, 3.50 francs. Paris: G. Steinheil, Editeur, 2 Rue Casimir-Delavigne, 1909.

This volume represents the views of the author, and describes his method, but there is too much detail and much useless repetition. Twenty pages are devoted alone to a description of ligation of the omentum, the method being in short the application of a series of interlocking ligatures. There are three fundamental procedures involved in the cure of all hernias, namely: (1) Total ablation of the hernial sac; (2) proper repair of the abdominal wall; and (3) extirpation of the omentum. The author properly lays stress on the high ligation of the sac, and scrupulously avoids leaving any suggestion of an infundibulum behind, and there is no question that this simple maneuver makes for permanency of cure. Most hernias are admitted to be of congenital origin. Repair of the wall implies the employment of the imbrication principle, of which more later.

On the subject of ligation of the omentum the statement is made that no operation merits the name of radical operation which omits removal of the omentum. It is advised that one should remove all of the omentum, everything within reach, the entire organ if possible. Ligation *en masse* is rightly condemned. Catgut is the suture and ligature material employed. One fairly large size is used for all purposes and is prepared by immersion for six months in a 5 per cent. solution of carbolic acid in oil. Great caution is urged to secure absolute hemostasis, to which all surgeons would readily subscribe. Priority and superiority over Bassini is claimed.

The steps of the repair are described minutely, the essential feature being the imbrication of the external oblique fascia. The author differs radically from others practicing overlapping methods in that he applies mattress sutures in such a manner as to pull the lower flap of external oblique fascia under the upper. The upper flap is then laid down and sutured, the cord being placed between the two layers. Thus it appears that the internal oblique and transversalis muscles are not sutured to Poupart's ligament, an omission which makes the method inferior to the Andrews modification. In women the round ligament is removed.

Before suturing the skin the author irrigates the wound with a 5 per cent. solution of carbolic acid, and drains. Among 1,134 operations reported there were 4 deaths, one of them being from chloroform, the anesthetic which is used.

The author has never seen a case of early recurrence; however, in 28 years he estimates the recurrences at 4.1 per cent. He does not advise operation before the age of 5 or 7. Obesity he considers the strongest contraindication to operation. The patients are kept in bed three weeks.

The illustrations are good and clear, and the little volume makes pleasant reading, though it would gain by being boiled down and better systematized. The author's method never would find favor among American surgeons, agreeing as they do as to the excellence of the principle of imbrication.

Selected Papers on Hysteria and Other Psychoneuroses. By Prof. Sigmund Freud, Vienna. Authorized Translation by A. A. Brill, Ph.D., M.D., Chief of Nervous Dispensary, Beth Israel Hospital. Paper. Pp. 200. New York: The Journal of Nervous and Mental Disease Publishing Co., 1909.

The work of Breuer, Freud, Jung, Ferenczi and their pupils has thrown a flood of light on the nature and treatment of hysteria and similar psychoneuroses. Indeed, even the pure psychoses are being attacked by the searching psycho-analytic methods of these untiring investigators.

Following the lines of the newer experimental psychology, and even adding to this psychology by his own investigations, Freud has given us a new and definite conception of hysteria, that *bête noire* of the general practitioner. It is decidedly reassuring to learn that hysterical symptoms are the symbolic expression of the realization of a repressed wish, which expression serves as a gratification for the patient, and that "the hysteric suffers mostly *from reminiscences.*" In the two cases reported, illustrating the method of examination and physical analyses and the happy results of treatment along lines of well-defined and rational psychotherapy, the author says, "the individual hysterical symptoms immediately disappeared without returning if we succeeded in thoroughly awakening the memories of the causal process with its accompanying affect, and if the patient circumstantially discussed the process, giving free play to the affect" (p. 4).

However convincing may be the many cases thus subjected to a rigid psycho-analysis and rational psychotherapy by Freud and his followers, we fear that their teachings will never become popular in the profession, for "the process is toilsome and wearisome for the physician and it presupposes a profound interest for psychologic incidents as well as a personal sympathy for the patient" (p. 84). Nevertheless, no one who pretends to practice scientific medicine can afford to neglect a careful study of the work of this group of earnest and practical psychologists.

Freud's views on what he calls the "anxiety neuroses" and on the prominent rôle of sexuality in the etiology of the neuroses are well elaborated in three of the essays. They have not met the same favor, however, as have his views on the psychic nature and treatment of hysteria.

Two of the essays, those on the general subject of psychotherapy, are particularly timely and deserving of special perusal because of the rational and scientific conservatism with which this much-maligned subject is handled. The difficulty with which the abstract reasonings of scientific psychology are followed is doubled in a language to which one is not born. Freud himself, moreover, is hard to read by reason of his close logic, somewhat original terminology and refined psychology. It is therefore a matter for self-congratulation on the part of the English-reading student to be given this *excellent and clear translation* by Dr. Bill, who is himself an active neurologist and knows the practical needs of the profession.

Pulmonary Tuberculosis and Sanatorium Treatment. By C. Muthu, M.D., M.R.C.S., L.R.C.P. Associate of King's College, London. Cloth. Pp. 201, with illustrations. Price, 3 shillings 6 pence net. London: Baillière, Tindall and Cox, 8 Henrietta Street, Covent Garden, London, 1910.

The author has had ten years' experience in open-air sanatorium treatment of the disease and writes with convictions and reason. The first chapters are devoted to the etiology of tuberculosis, with a brief account of symptoms and prognosis. The author elaborately considers the relatively great importance of predisposing conditions, insisting that the bacillus is not the whole or sole cause of the disease. Whether, as he believes, man became afflicted with tuberculosis only after he became a house-dweller cannot be proved, and whether the bacillus was first able to live outside animal bodies and gradually acquired a parasitic habit is also incapable of proof. But these views appeal to the imagination if they do not convince the reason.

The author's discussion of the early diagnosis of pulmonary tuberculosis is good, but too brief. Tuberculin tests he deprecates as often dangerous. The practical application of the opsonic index as a test he thinks is very limited. The Calmette reaction he thinks is uncertain and unreliable.

It is unfortunate that he did not consider the subject of prognosis more fully and practically. He says that it will depend "first on the strength of vital resistance" (but does not tell us how to estimate this), and second, on the way that resistance is used.

The second part of the book, on open-air sanatorium treatment, is good and deserves praise. The author recognizes the need of rest when a patient's temperature is 99 F. or over, but he also appreciates the need of exercise for every patient who can take it. The kinds which he commends are walking, breathing, singing, reading, manual training and tramping. These exercises and the indications and contraindications for them he describes fully. By tramping he means excursions during which one walks, camps and leads a simple outdoor life. It is of course adapted only to those who have nearly or quite made an apparent recovery. The utility of inhalation of formalin or mixtures of it, chloroform and aromatics is discussed at some length and advocated. The usefulness of static electricity is also considered and urged, not as a specific but an aid. Part 3 is an interesting consideration of the social and economic factors of tuberculosis, remedial and preventive measures.

The Prevention and Treatment of Abortion. By Frederick J. Taussig, A.B., M.D., Lecturer in Gynecology, Medical Department, Washington University. Cloth. Pp. 179, with 59 illustrations. Price, $2. St. Louis: C. V. Mosby Co., 1910.

Taussig found in six hundred hospital patients that the ratio of abortion to confinement was 1 to 2.3. This frequency is greater than that found by most writers who generally state the frequency is as 1 to 5. The anatomy and pathology is clearly presented and illustrated by numerous cuts, many of them original. Under etiology a classification of the causes is given that is clear and satisfactory. Under exciting causes and especially death of (or injury to) the fetus by placental interference with nutrition should be included placenta prævia. In the chapter on symptoms and clinical course it is stated that fever is frequently present and due to the decomposition of decidua or placenta. The mistaken impression is left that this is something else than sapremia. The very important subject of diagnosis and differential diagnosis as also the short discussion on prognosis are excellently presented.

In Part 2, "Prevention of Abortion" prophylaxis is considered under the heads of prophylaxis before conception, during pregnancy, in threatened abortion and prevention of criminal abortion. The importance of the Wassermann reaction to determine syphilis in cases of habitual abortion is pointed out. In speaking on legislation as a means of preventing criminal abortion the author surprises us a little by suggesting that the Federal Government should control the matter of abortion and intimating that every abortion, no matter what the cause, should be officially reported. The difference between the registration of deaths where burial certificates can be required and the registration of abortion where the egg can be easily destroyed is so great that the suggestion impairs one's confidence in the author's practical judgment with this field of medicolegal practice.

The treatment of abortion is characterized by a wise but temperate conservatism. The operative technic including curettage is described fully. Curettage is rarely indicated in cases of sepsis. The chapter on perforation is very valuable. Chapters on missed abortion, mole pregnancy, threatened abortion and ergot and its preparations close the book.

The work can be highly commended as a concise, practical and timely presentation of an important and frequently neglected subject.

New and Nonofficial Remedies, 1910. *Containing Descriptions of the Articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association, prior to Jan. 1, 1910.* Paper, 25 cents; Cloth, 50 cents. Pp. 256.

To the conscientious physician who wishes to go outside of the Pharmacopeia and the National Formulary preparations in his prescribing, this annual will prove valuable. It gives him within a brief space information as to the new non-official and especially proprietary drugs about which it would be almost impossible for him to obtain information, except from the manufacturers themselves. It is the only source from which the physician can obtain reliable information regarding them.

The 1910 edition has been revised and contains descriptions of such new drugs as seem worthy and which have been accepted by the Council on Pharmacy and Chemistry of the A. M. A., prior to Jan. 1, 1910. The most notable addition is that of serums and vaccines, and the importance this method of treatment is assuming makes a collation of information concerning them of the utmost value to the physician. Notes of caution properly have been added with reference to the antipyretics and intestinal antiseptics, and with reference also to the assertions of manufacturers that certain drugs are non-poisonous or non-irritating. The Annual follows the plan of the former one and should prove indispensable to the physician and the pharmacist who need reliable information on non-official and especially on proprietary drugs.

Nervous and Mental Diseases. Edited by Hugh T. Patrick.
M.D., Professor of Neurology in the Chicago Polyclinic and Charles
L. Mix, A.M., Professor of Physical Diagnosis in
University Medical School. Vol. X of The
Series under the General Editorial Cha
M.D., Professor of Laryngology and Rhin
Medical School. Cloth. Pp. 248, with
Series 1909. Chicago: The Year-Book Publishers.

In this volume, covering the work of the year in nervous and mental diseases, several things stand out rather prominently. One is a changing view in regard to hysteria, there being a distinct movement in the study of this disease to classify manifestations, to give each a more significant separate designation, to find a distinct pathology for it, and to ascribe a very large proportion of symptoms, such as sensitivosensorial hemianesthesia, contraction of the visual field, monocular polyopia, dyschromatopsia, loss of pharyngeal reflex, hysterogenetic zones, etc., to unconscious suggestion, usually of medical origin. It may well be that with further study of the neuroses the term "hysteria" will become obsolete. Another suggestion that would seem to have a reasonable basis is that chorea is a symptom and not a separate disease and that the effort to attribute it to some specific infectious cause is not justified. Incoordinated muscular movements in the adult and the old are attributed to arteriosclerosis, faulty nutrition, toxemia, etc., causing lost action of the motor control cells. To many causes just as general may be attributed this incoordination in children. Almost unanimous testimony is given as to the distinct value of the Flexner-Jobling serum in meningitis. The serodiagnosis of syphilis has placed tabes and general paralysis of the insane more certainly among the so-called parasyphilitic diseases. Mental diseases are given very little space and there is little editorial comment throughout the book. An index of subjects and authors completes the book.

Contributions to the Study of Rectal Disease. By F. Victor Milward, B.A., M.B., B.C., F.R.C.S., Assistant Surgeon to the General Hospital, Birmingham. Cloth. Pp. 92, with illustrations. Price, 2 shillings. Birmingham, England: Cornish Brothers, 1909.

This is a very imposing title for a little duodecimo brochure of some ninety pages. Eight chapters are devoted respectively to "Palliative Treatment of Hemorrhoids," "Signficance and Recognition of Blood Passed Per Anum," "Stricture of the Rectum in its Relation to Disease," "Two Cases of Carcinoma Extirpated by the Vagino-Perineal Route," "Congenital Piles," "Obstipation and Its Relation to Constipation," "Pain of Anal Origin and Its Alleviation," and "The Sigmoidoscope as a Means of Diagnosis in Rectal Disease."

There is nothing especially novel in the treatment of any of these topics. For example, under the structure of the rectum, mention is made of cases of constipation without bowel action "for months." The circumference may be "immensely increased." The majority of these cases of constipation of months' duration are examples of Hirchsprung's disease in which the rectum is not involved, the dilatation stopping short at the commencement of the latter. We fear our late distinguished visitor, M. Thomas Jonnesco, will hardly recognize himself when reported as Jonowsky. Proctology must be at a rather low ebb in Great Britain when it is necessary to recommend the use of the sigmoidoscope. Altogether, there is no danger that this work will supplant those to which we are accustomed in this country.

The Medical Complications, Accidents and Sequels of Typhoid Fever and the Other Exanthemata. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia, and E. J. G. Beardsley, M.D., L.R.C.P., Assistant Physician to the Out-Patient Department of the Jefferson Medical College Hospital. With a Special Chapter on the Mental Disturbances Following Typhoid Fever. By F. X. Dercum, M.D., Professor of Mental and Nervous Diseases in the Jefferson Medical College. Cloth. Pp. 391, with [illegible] illustrations. Price, $3.25 net. *Philadelphia*: Lea & Febiger.

The present edition of this work is a full revision of the former edition of ten years ago, with a summary of the literature since that time, and the addition of five new chapters in the complications and sequelæ of variola, scarlet fever, measles, varicella and rubella. Nearly 300 pages are devoted to typhoid alone, and deal only with atypical, or unusual manifestations, and their differential diagnosis. The review of the literature is exhaustive and up to date, and full references, often in great profusion, are given at the bottom of each page. A valuable feature is the abundance of statistical information given throughout the volume. The treatment is left untouched. The reader will perhaps find it a little difficult to see just why the complications and sequelæ, alone, of the exanthemata should be included in a volume three-fourths of which is devoted to typhoid, and will perhaps feel a little regret that the whole volume was not devoted to typhoid alone, including treatment. The book is, notwithstanding, a valuable monograph on the subject with which it deals.

Practical Hydrotherapy. By Curran Pope, M.D., Professor of Physio-Therapy, University of Louisville Medical Department. Cloth. Pp 646, with Illustrations. Price, $6. Cincinnati Medical Book Co., 1909.

This is a sane book on the subject, one free from the fads and freakishness so frequently found in works dealing with special methods of therapy. The author makes it plain at the outset that while thoroughly appreciating the value and advantages of hydrotherapy, he "fully realizes that it is not a cure-all," and he has written the book "with a full comprehension of the real value and the limitations of this agent." To this general standard the author in a great degree adheres. Not but that he is more enthusiastic and optimistic than most of the readers of his book will be over the possibilities of hydriatics; this is to be expected and—for the work to be of value—desired. Strictly speaking, the book deals not with hydrotherapy alone, but also with what the author terms the "associated procedures" of phototherapy and thermotherapy. Moreover, in the therapeutic portion of the book the use of water is in many cases recommended as entirely secondary to the medicinal, dietetic or hygienic treatment. The book is well prepared mechanically, and is rather freely illustrated. From a literary standpoint one criticism must be made: the author has a disconcerting habit of changing from the first to the third person even in the same paragraph.

Clinical Studies for Nurses. By Charlotte A. Aikens, formerly superintendent of Columbia Hospital, Pittsburg. Cloth. Pp. 510, with illustrations. Price, $2 net. Philadelphia: W. B. Saunders Co., 1909.

This is a companion volume to "Primary Studies for Nurses," which we reviewed Aug. 7, 1909. The name, "Clinical Studies for Nurses," is rather misleading, as it suggests practice of medicine; the book, however, is devoted chiefly to definition and description of the various diseases, with enumeration of the symptoms, complications and sequelæ which it is essential that a nurse should be able to recógnize. The author acknowledges that the book is a compilation, and that she has tried to take average statements, as many standard text-books differ in such things, for example, as the length of incubation periods. Considerable space is given to obstetric nursing. Miss Aikens believes that all nurses should be taught how to give massage, and Section IV is given up to "Physical Therapeutics, Massage, and Nursing in Nervous and Mental Diseases." There are six hundred questions for self-examination and review, the subjects of some of which are hardly within the province of a nurse. In appendices are hospital and invalid dietaries, diet-lists, notes on infant-feeding, methods of preparation of surgical materials, and formulas of solutions in use in most hospitals.

Skin and Venereal Diseases: Miscellaneous Topics. Edited by W. L. Baum, M.D., and Harold N. Moyer, M.D. Vol. IX of the Practical Medicine Series. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Postgraduate Medical School. Cloth. Pp. 240, with illustrations. Price, $1.25. Series 1909. Chicago: The Year-Book Publishers.

The literature of a great number of subjects is reviewed, but in a very interesting manner. In the department of skin and venereal diseases pellagra, now much to the fore, is given considerable space and our knowledge concerning it is very well summarized. Leprosy and what is called leprophobia, on account of a recent case in Washington and New York, are given considerable attention. The vaccine treatment of gonorrhea, syphilis and its serodiagnosis, and a group of diseases called syphiloid whose nosology is now looming up in the literature are treated interestingly. In the miscellaneous department are included the subjects of heredity, the autoprotective mechanism of the body according to the theory of Sajous (a most interesting one), alcoholism, longevity, necessity of autopsies, medicoethical and medicolegal questions, the birth-rate, matters concerning the profession at home and abroad, and many others, all going to make up an interesting summary of the year's work in the special department of skin and genito-urinary diseases and in the general field of medical literature.

Preventable Diseases. By Woods Hutchinson, A.M., M.D., Author of "Studies in Human and Comparative Pathology," etc. Cloth. Pp. 442. Price, $1.50. Boston: Houghton Mifflin Co., 1909.

Many of the chapters of this book have appeared as separate articles in lay magazines from time to time. Some of the subjects are: "Colds and How to Catch Them;" "Appendicitis, Nature's Remnant Sale;" "Diphtheria, The Modern Moloch: Offering up a Guinea-Pig for the Life of a Child." These indicate the attractive popular style of the author, which is clearly a considerable factor in making the book of service in the education of the public on medical and sanitary topics. The graphic portrayals of the vast benefits which the public is daily receiving through facts learned by means of animal experimentation should prove of great value in giving the public the truth on this subject.

It would be justifiable to criticize Dr. Hutchinson on the ground that he is too severe in his censure of some popular ideas, and that he does not leave room for the exceptions that modify all general rules. It would be ungracious, however, to dwell on the trivial faults of a work which, all must agree, has so much to commend it; it is supplying the public with much needed information about disease and health.

Diseases of the Stomach. By S. H. Habershon, M.A., M.D., F.R.C.P. Pp. 565, with 8 colored and 11 black-and-white plates. Price, $2.50. Chicago: Chicago Medical Book Co., 1909.

Dr. Habershon has undertaken to produce a treatise of moderate size on diseases of the stomach, instead of attempting to bring his father's work on diseases of the abdomen up to date, as he has often been requested to do. The result is a satisfactory volume, which gives the essentials of the subject. Special attention is given to the symptomatology of stomach diseases, which are treated, each symptom separately, in two chapters disconnected from the description of the diseases in which they occur, and to the relation of the stomach to other organs. The laboratory methods of diagnosis are given with sufficient fulness for practical purposes.

Vital Economy. By John H. Clarke, M.D. Cloth. Pp. 119. Price, 50 cents net. New York: A. Wessels, Newold Publishing Co., 1909.

This small book is full of meat. It is a protest against the careless taking of general principles—even though those principles be excellent in most cases—as rules to be followed by every patient. In other words, it is a plea for exceptions as careful judgment indicates to the individual. Among the subjects treated in this iconoclastic way are exercise, bathing, outdoor sleeping, etc. The book is primarily written, however, to aid the near-strong and the near-well to remove some small defect in habit or environment which prevents the realization of the highest physical possibilities. The use of coffee, tea and other stimulants are set forth as full of harm.

Doctor Rast. By James Oppenheim, Author of "Monday Morning and Other Poems." Cloth. Pp. 321. Price, $1.50. New York: Sturgis & Walton Co., 1909.

A series of stories, separate but with the same principal characters. The scenes are laid among the Jews of New York City, and the emotions and privations of these people are portrayed in vivid colors. The doctor—would that we all were of as noble stuff as he—shares their joys and sorrows and practices medicine more for the good that he does than for the money he gets out of it. The book is worth reading for pure pleasure, and considerable inspiration and sympathy are likely to be received in the process.

Recent Advances in Physical and Inorganic Chemistry. By A. W. Stewart, D.Sc., Lecturer on Organic Chemistry in the University of Belfast. Cloth. Pp. 250. Price, $2.50. New York: Longmans, Green & Co., 1909.

This is a series of essays or short theses on selected chapters of physical chemistry, which contain the latest results of researches in the special fields taken up. The work covers both organic and inorganic physical chemical research. It is, in short, a compilation of the most advanced work in the several divisions of physical chemistry with the experimental details and calcúlations omitted, presenting only the ultimate findings, and making a survey which will instruct without tiring.

Milk and its Relation to the Public Health. By Various Authors. Hygienic Laboratory Bulletin No. 56. (Revised and enlarged edition of Bulletin No. 41.) Paper. Pp. 829, with 66 illustrations. Washington: Government Printing Office, 1909.

This volume is the second and enlarged edition of Bulletin No. 41 of the Hygienic Laboratory. The first edition having been exhausted the work has been revised, some of the sections added and the new volume bids fair to be of greater value to the hygienist.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

County Society Acts on Ophthalmia Neonatorum

The Tippecanoe County (Ind.) Medical Society has sent out a circular letter to each county society in the state, calling attention to the fact that 35 per cent. of the blindness in Indiana is due to ophthalmia neonatorum and asking for the cooperation of the profession by county and district society action in hopes of abolishing the disease in the state. The special committee on this subject, appointed by the Tippecanoe County Society, recommends that the widest publicity be given the Credé method and that all societies cooperate to secure at the next legislature the passage of a law that will aid in stamping out this preventable disease. It is also recommended that each county society appoint a committee on ophthalmia neonatorum to take up the work in the county and that reports be sent in not later than May 15, in order that the Committee on Ophthalmia Neonatorum of the American Medical Association may be able to report at the St. Louis meeting. Such action is highly commendable. This propaganda should be taken up by each state society.

Contract Practice in Norway

A bill on the subject of compulsory insurance of wage earners is now before the legislature of Norway. Recent issues of the *Medicinisk Revue* contain several articles on the attitude to be taken by the profession in the matter. Loennecker denounces the evils of contract practice both from the standpoint of the physician and of the sick policy-holder, urging the advantages of payment for individual services and the free choice of a physician. Silvertsen extols the benefits that would follow the appointment of a district physician, on a living salary, for each 2,000 inhabitants. Thus for a town of 60,000 he would have 30 physicians who by their official position would be able more effectually to take the lead in large movements for hygiene, prevention of tuberculosis, etc., than is possible for physicians at present in their private capacity.

Legislative Notes

NATIONAL LEGISLATION

A bill has been introduced in the Senate (S. 6877) to amend the act incorporating the American National Red Cross, which became a law in 1905, by adding a section forbidding any person corporation or association other than the American National Red Cross and its employees and agents to use the emblem of the Greek red cross on white ground. Owners of trade-marks registered in the United States Patent Office prior to Jan. 5, 1905, are exempt.

WASHINGTON

The Washington legislature has adjourned. The Committee on Medical Legislation and Public Policy of the state medical association, had introduced into the senate of the state of Washington a bill requiring attending physicians or surgeons to testify as to the facts observed and excluding the testimony of physicians or surgeons on "opinions formed." Expert testimony is to be given by physicians or surgeons appointed by the court entirely independent of either side in the case. The bill aims to secure true expert testimony, without bias. This bill passed the senate and, it is stated, would have passed the house had it been introduced in time.

H. B. 114 was introduced at the request of the state medical association committee and passed by the legislature. This is a bill regulating the practice of medicine and providing for a single board composed of five members from the regular profession, two homeopaths and two osteopaths. All persons who treat the sick or afflicted are required to appear before this board for examination. Three forms of certificates are authorized: one allowing the holder to practice medicine and surgery; one allowing the holder to practice osteopathy, and one allowing the holder to practice any other system or mode of treating the sick not referred to in the section. Registration of certificates with the county clerk is required.

NEW YORK

Among bills that have passed the assembly is one establishing at Yorktown, Westchester county, the Mohansic State Hospital for the Insane and providing for a board of managers to be appointed by the governor within ten days after the bill became a law. This hospital is intended to relieve the congestion existing in the Manhattan and King's Park state hospitals. A bill has been introduced into the assembly to require that greater precautions be taken by sellers of cocain and other drugs of the kind. A bill has been introduced to require the Board of Education to supply pupils with eyeglasses after the need has been determined. The board is authorized to raise $15,000 a year for the purpose.

On February 23, Mrs. Diana Belais, head of the New York Antivivisection Society, Stephen Coleridge and the counsel for the society appeared at a joint hearing in the assembly chamber on the Brough-Murray antivivisection bill. Dr. Simon Flexner, Dr. James Ewing and Prof. Frederick S. Lee argued against the measure. The bill puts the practice of vivisection under the supervision of the State Board of Regents, provides for the inspection of laboratories where vivisection is conducted, by inspectors appointed by the regents at the suggestion of the humane societies, and for the licensing of operators.

OHIO

A number of bills of interest to the medical profession have been introduced into the Ohio legislature, as follows:

S. B. 24, to provide for the disinfection of the house and contents in which a person has had pulmonary tuberculosis; S. B. 44, to provide for special elementary schools for children afflicted with tuberculosis; S. B. 51, the usual optometry bill; S. B. 61, to authorize the Ohio State Board of Health to establish a bureau for the prevention of infectious and contagious diseases; S. B. 121, to provide that a certain proportion of the taxes shall be used for the maintenance of district tuberculosis hospitals; H. B. 111, to legalize the sterilization of confirmed criminals, idiots, imbeciles, epileptics, etc.; H. B. 116, to regulate the conduct of maternity houses and lying-in hospitals; H. B. 119, to regulate the care of dependent and neglected children; H. B. 173, to provide physical education in city and village school districts; H. B. 204, to regulate the sale of cocain, heroin and eucain; H. B. 205, to amend the statute now in force giving jurisdiction to justices of the peace, police judges and mayors by adding a section authorizing them to hear cases regarding the sale of cocain, heroin and eucain; H. B. 244, to add chicken-pox, measles and whooping-cough to the list of reportable diseases; H. B. 385, to regulate the itinerant vending of medicines, nostrums and appliances for the treatment of disease; H. B. 408, amending the statutes providing for the care of school children by providing that each child shall be annually examined for sight, hearing and obstructions to breathing, the examinations to be held under the control of the Ohio State Board of Health.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month—Second Weekly Meeting

Pharmacologic and Therapeutic Actions of Drugs (Continued)

II. Drugs Acting on the Blood: A. Drugs acting on the plasma. Alkalizers of the plasma, purgatives, diaphoretics and diuretics. B. Drugs acting on the red corpuscles. Direct and indirect hematinics. Drugs altering composition of hemoglobin, CO, coal-tar derivatives, etc. C. Drugs acting on white corpuscles.

III. Drugs Acting on the Cardiac Mechanism: A. Drugs acting on the heart directly. Drugs which (a) increase force of contraction, (b) decrease force of contraction, (c) increase rate of heart beat, (d) decrease rate, (e) increase both force and rate, (f) decrease both force and rate. B. Drugs acting on vagus center. C. Drugs acting on accelerating center.

IV. Drugs Acting on the Blood-Vessels: A. Drugs acting locally on vessels. 1. Dilators, irritants, rubefacients, vesicants, pustulants, escharotics. Counter-irritation. 2. Constrictors (a) contract muscular coat. (b) coagulate albuminous fluids around vessels. B. Drugs acting on vasomotor centers. 1. Vaso-dilators. 2. Vaso-constrictors. Astringents, styptics.

V. Drugs Acting on the Skin: A. Diaphoretics. Drugs acting (a) peripherally. (b) centrally, (c) mode of action doubtful. B. Anhidrotics. (a) Drugs acting peripherally, (b) mode of action doubtful. C. Drugs producing a rash on skin when taken internally.

VI. Drugs Acting on the Urinary System: A. Increase quantity of urine. 1. Raising arterial pressure (a) generally, by increased heart action or by general vascular contraction, or (b) locally in kidney, by contracting efferent vessels or dilating afferent vessels. 2. By acting on secreting nerves or renal cells, (a) increasing water, or (b) increasing water and solids excreted. B. Diminish quantity of urine. Toxic effects of certain drugs. C. Render urine acid, *alkaline*. *D. Prevent decomposition of* urine. E. Alter composition of urine, hematuria, changes in color and odor, increase of urea. F. Drugs acting on bladder and urethra.*

Medicolegal

Validity and Construction of Statute Providing for Abatement by State Board of Premises and Occupations Menacing to Public Health

The Supreme Court of Minnesota had for decision, in J. L. McMillan Company vs. State Board of Health, the question of the constitutionality of section 2146 of the Revised Laws of Minnesota of 1905. Section 2143 provides that no person, without the written permission of the board of health of the town, village, or city, shall engage therein in any trade or employment which is hurtful to the inhabitants, or dangerous to the public health. Section 2145 is to the effect that an appeal may be taken from any order of the board to the district court of the county by giving notice and bond as in other cases; if the appeal is taken within twenty days before the time for holding a general term of the court it must be heard at such time and either party is entitled to a trial by jury, but if the appeal is taken more than twenty days before any such term the court shall appoint a time and place for hearing it, for which purpose a jury may be summoned; such appeals shall be tried as in other civil cases, but during their pendency the offense, trade or employment shall not be exercised contrary to the order appealed from, and, if so exercised, the appeal shall forthwith be dismissed. Section 2146 provides that, on written complaint made to the State Board that any person is occupying or using any building or premises within any town, village or city for the exercise of any such trade or employment, it shall appoint a time and place for hearing and give notice of not less than ten days to the complainant and the person complained of, and after such hearing, if, in its judgment, the public health or comfort and convenience require, it may order such person to cease from further carrying on such trade or employment in such building or premises; and after written notice of such order, any person thereafter exercising such trade or employment in said building or premises shall forfeit one hundred dollars for each day after the first to be recovered as provided in the preceding sections. Any person aggrieved by such order may appeal, and said appeal shall be taken and determined in the same manner as prescribed in section 2145. During its pendency such trade or employment shall not be exercised contrary to the orders of the State Board, and on the violation of any such order the appeal shall forthwith be dismissed.

The Supreme Court says that the statute in question is an exercise of the police power of the state, a sovereign power, for the protection of public health comfort and safety by providing for the abatement of premises and occupations which are a menace to the same. It is clearly constitutional unless it is an arbitrary and unnecessarily oppressive use of the power. The company contended that it is an arbitrary and oppressive exercise of the right in that it deprives the parties of their property without due process of law and denies them the right to obtain justice freely. Two specifications were made: The first one was that the statute does not prescribe any proper or just procedure or machinery for taking an appeal, in that there is no provision as to where or in what manner the notice of appeal shall be given, or for a return to the district court, or for framing issues therein. The second, was that the statute arbitrarily so burdens the right of appeal with oppressive and unnecessary conditions as to deprive the party appealing of its property without due process of law, and of its right to obtain justice freely. The court does not concur in this view, but holds the law constitutional.

The procedure provided by the statute is not as impotent as claimed, for it is reasonably adequate. It provides that any aggrieved party may appeal within five days after written notice of the making of the order by giving notice of appeal as in other cases. The usual and well-understood method of giving notice of appeal in such other cases is by serving a written notice of appeal, stating that the party appeals from the order, describing it, on the adverse party or his attorney. In case of an appeal under the statute here in question the adverse party is the Board of Health, the agent of the state, and the notice of appeal, as in other analogous cases, should be served on the president of the board or its secretary and on the attorney general, the chief law officer of the state. If, after an appeal is taken, the board should fail or refuse on proper demand to make return of its proceedings, the district court on due application would compel a return as in other cases. When the appeal is perfected the matter is to be tried and determined on its merits by the court with a jury if either party so demands. It necessarily follows that if the case is of such a character that it is necessary to frame issues for the jury the court may do so in the exercise of its inherent and general powers in accordance with the usual practice in other cases.

A sufficient answer to the argument about the right of appeal being arbitrarily burdened with oppressive and unnecessary conditions is that the right of appeal is neither a natural nor a constitutional right, but a statutory one which the legislature may give or not in its discretion, and if it gives the right it may do so on such conditions as it deems proper. But the claim that the right of appeal given by this statute is burdened with unnecessary and oppressive conditions is not justified by the provisions of the statute. Whether the condition that the nuisance shall not be continued pending the appeal is a reasonable one must not be considered alone from the viewpoint of the dollar mark, but from the viewpoint of public interests as well. It is evident from the language of the statute that the legislature considered the interests both of the individual and the public. The statute does not authorize any interference with the place or occupation which is charged to be a nuisance menacing the public health, until it is determined to be such after ample notice and full hearing. In giving the right of appeal from such determination the legislature was confronted with the fact that to permit the nuisance to continue pending the appeal would be hazardous to the public health, perchance to human lives. In this situation consideration of public health and safety rightly prevailed, but to make the condition of appeal as favorable as practicable the statute made provision for a prompt hearing and determination of the appeal by providing for a special term of court to hear it if necessary.

Application of Statute of Limitations to Action for Malpractice

The Supreme Court of Rhode Island says that what is termed the plaintiff's declaration, in the case of Griffin vs. Woodhead *(74 Atl. R., 417), alleged, in substance,* that the defendant, a physician whom the plaintiff had employed, so unskillfully and negligently conducted himself in the caring of a broken hip that permanent shortening of her leg had resulted. The defense was that the cause of action, if any, was more than two years old, and hence barred by the Rhode Island statute of limitations. This provides, in section 248, that: "Actions for injuries to the person shall be commenced and sued within two years next after the cause of action shall accrue, and not after." Section 249: "Actions of trespass, except for injuries to the person, shall be commenced and sued within four years next after the cause of action shall accrue, and not after." Section 250: "All actions of account, . . . of the case except for words spoken and for injuries to the person, all actions of debt founded upon any contract . . . shall be commenced and sued within six years," etc. The plaintiff claimed that her declaration was based on a contract, and that the period of six years given by section 250 was therefore available for her. But the court takes the view of the defendant, affirming a judgment in his favor, for the reason that it is of the opinion that the provisions of section 248 are so explicit as to the period of limitations for all actions for injuries to the person, whatever may be their form, as to remove any question. For one thing, no exception as to the form of action is made by the section, and, lest it should be supposed that the period of four years allowed in section 249 as to other actions of trespass should be supposed to be inconsistent with section 248, "injuries to the person" are expressly excepted from it. So, too, in section 250. Nor does the court agree with the contention that the statute refers to injuries that result from traumatisms. It finds no such limitations therein expressed, and it has decided that there are many other classes of injuries to the person than those caused by the application of force to the body. Furthermore, to hold that injuries to the person, when caused by a breach of contract, may be sued within six years, would be to create arbitrarily a longer period of liability in certain exceptional cases, such as this case and the case of common carriers, than is established for other cases.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

March 12

1 Dementia Præcox. S. E. Jelliffe, New York.
2 *Brain Storm. F. Woodbury, Philadelphia.
3 Cerebrospinal Meningitis. C. Bagley, Baltimore.
4 *The Scope of Office Gynecology. J. A. McGlinn, Philadelphia.
5 Beriberi as Seen in the Far East. C. S. Braddock, Haddonfield, N. J.
6 Iconoclastic Revision of a Classical Case of Diverticulum of the Esophagus. C. D. Spivak, Denver.
7 Abstraction of Calcium Salts from the Mother by the Fetus: Cause of Fatty Infiltration of the Liver Cells of the Former. J. G. Drennan, Baltimore.
8 *Tuberculous Ulcers of the Stomach. A. G. Ellis, Philadelphia.
9 Enormous Ascites. S. M. deLoffre, Fort Bliss, Tex.

2. **Brain Storm.**—The term brain storm, which is a popular, and not a scientific one, is a phrase, Woodbury states, familiarly used to describe brief states of mental emotional perturbation without reference to their cause. Such attacks, he asserts, may be influenced by atmospheric and climatic conditions to an extent not usually known or suspected. The presumed proximate causes in such cases are only incidental. The real causes lie deeper. Emotional, confusional conditions may occur in apparently normal persons, but are encountered more frequently among the insane. Brain storms, so-called, will be observed more frequently in persons who are neurasthenic and in a depressed vital condition. They are frequently epileptic, or epileptiform. Brain storms as a rule indicate pathologic conditions of the body or mind, but they are symptomatic of general conditions, and are not of specific significance. Violent outbursts of rage or emotion, therefore, have medical importance, and when of frequent occurrence, should be investigated by a physician skilled in mental disorder. In medicolegal cases the phrase brain storm is popularly understood to imply temporary loss of will power, and consequently diminished responsibility on the part of the individual, which is the very point at issue when a case is brought before the court. Woodbury regards the use of figurative and unscientific language by medical witnesses objectionable, since it tends to influence unduly the minds of the jury in weighing the culpability of a prisoner under trial.

4. **Office Gynecology.**—According to McGlinn, there is one field in office gynecology which is being sadly neglected, and that is in the *treatment of retrodisplacement* of the uterus by the use of the pessary. Here the judgment of the physician is put to the test in selecting the type of displacement which should receive such treatment. In old cases, or those associated with adhesions or gross pelvic lesions the pessary has no place, but in the postpuerperal cases which are not complicated and in which there is a good perineum, the intelligent use of the pessary will result in a cure in many cases. McGlinn does not believe in the office introduction of a stem pessary for the cure of dysmenorrhea, sterility or anteflexion.

8. **Tuberculous Ulcers of Stomach.**—The two cases of tuberculous ulcers of the stomach, reported by Ellis, were both secondary to well-marked lesions elsewhere, and illustrate two types of extension of the tuberculous process to that organ. The first case was evidently due to the ingestion of bacilli derived from a pulmonary lesion, the second to extension of the process from the continuous peritoneum. A woman, aged 85, had extensive ulcerative tuberculosis of both lungs and numerous tuberculous ulcers of the ileum and colon. In the *stomach, on the greater curvature, about midway* between the pylorus and the cardia, was a row of eight ulcers, a few of them exceeding one centimeter in diameter. They were all shallow, with slight or no elevation of the margins. In the floor of most of them were gray or yellow tubercles. In addition to these ulcers there were four large conglomerate tubercles that appeared on the verge of ulcer formation. Spreads made from the scrapings of one of the ulcers contained many tubercle bacilli. Sections from one ulcer showed absence of the mucosa and a thickened submucosa, in which were numerous more or less perfect histologic tubercles. Giant cells were occasionally seen but were very few in number. Caseation necrosis was prominent.

A man, aged 25, had chronic adhesive tuberculous peritonitis and multiple tuberculous fistulas in the left inguinal and trochanteric regions. On the greater curvature of the stomach slightly nearer the cardiac end, was an indolent ulcer, 3.5 by 5 cm. Four and six centimeters respectively from the cardia were two ulcers, 1.5 and 2 cm. respectively, in diameter, that perforated when adhesions to surrounding structures were separated. On the posterior wall, eight centimeters from the cardia, was an ovoidal, elevated mass, 1.5 cm. in diameter, that was cyst-like in consistency. Puncture through the overlying mucosa showed the content to be a thick, yellowish fluid, in stained smears of which were numerous tubercle bacilli. On the serous surface of the stomach, opposite to each of the lesions described, as well as scattered irregularly over the entire organ, were numerous tubercles of various sizes. The omentum, mesentery, pancreas and spleen were adherent to the stomach, and the coils of intestines were matted into an inseparable mass.

Medical Record, New York

March 12

10 Tuberculosis of the Kidney. H. H. Morton, Brooklyn.
11 *Chauffeur's Fracture. W. S. Thomas, New York.
12 Recently Described Symptoms in Spinal Cord Tumors. P. Bailey, New York.
13 Is Medicine Faithfully Mirrored in Molière. W. B. Konkle, Montoursville, Pa.
14 Chronic Constipation. J. R. Verbrycke, Washington, D. C.
15 Pilocarpin. H. H. Redfield, Chicago.
16 *Letter to a Neurologist. J. Collins, New York.

11. Abstracted in THE JOURNAL, Feb. 26, 1910, p. 733.

16. **Letter to a Neurologist.**—Collins describes the letter of a mother whose son has disappointed her and his father, by becoming the victim of the periodic drink habit. He has reached the age of 35 without being cured or having any absorbing interest in life. The neurologist tries to show the mother that she must give her son some interest in life sufficient to fill his mind and prevent him from desiring the solace of the cup that inebriates. He shows that the condition is one of a lack of education in ambition, and a desire to do something worth while in the world.

Boston Medical and Surgical Journal

March 10

17 *Uses of Fear in Preventive Medicine. M. J. Rosenau, Boston.
18 Non-Tuberculous Renal Infections. E. L. Keyes, New York.
19 The Health of Young Persons in Massachusetts Factories. W. C. Hanson, Boston.
20 Submucous Fibroids. P. E. Truesdale, Fall River, Mass.

17. **Fear in Preventive Medicine.**—Reasonable fear saves many lives and prevents much sickness, says Rosenau. It is one of the greatest forces for good in preventive medicine, and at times it is the most useful instrument in the hands of the sanitarian. It is often the fear of a disease that gives the health officer the ways and means to combat it. Because we fear cholera, we have none of it in the breadth and length of the United States; we have no fear of typhoid and that is why it is endemic. A case of cholera in any of our cities to-day would at once be placed *incommunicado*, under the strictest quarantine. The sick room would be screened against flies, the dejecta would be disinfected, the nurse and the physician would be isolated, or they would be required to take most exacting precautions, gallons of germicides would be spilled and fumigants burned galore to proclaim the energy of the sanitary department. The neighborhood would be searched for secondary cases to nip them in the bud. Finally, the convalescents would not be given their liberty until the danger of bacillus carrying had passed. By strange contrast, little attention is paid to a case of typhoid in the neighborhood, or even in the same house. Still less regard is ordinarily given to the dangers of typhoid infection on a dairy farm, or in a butcher's shop or bakery, or other places where foodstuffs are handled. It is the lack of fear of yellow fever that permits it to smolder in an endemic focus, just as the lack of fear of typhoid permits it to smolder in Boston, Philadelphia, Washington and other American cities. A sharp epidemic of typhoid is a good life saver. The fear it instills builds filter plants, spends money, and awakens energy for other necessary and expansive sanitary improvements. It is the fear of tuberculosis rather than the pity of it all that prompts legislatures to build sanitaria and establish clinics and to appropriate large sums of the people's money for the control of this disease of defective civilization.

Lancet-Clinic, Cincinnati

February 26

21 *Prophylaxis of Pellagra. C. H. Lavinder, Washington, D. C.
22 Efficacy of Various Glass in the Prescribing of Spectacles. J. S. Wyler, Cincinnati.
23 The Cincinnati Academy of Medicine. R. B. Hall, Cincinnati.

21. Abstracted in Society Proceedings, THE JOURNAL, Nov. 20, 1909, p. 1770, and also published in *Atlanta Journal-Record of Medicine*, January, 1910.

Kentucky Medical Journal, Bowling Green

February 15

24 Surgical Diseases of the Lower Jaw. J. G. Sherrill, Louisville.
25 Diagnostic Aids in Blood Examinations. B. J. O'Connor, Louisville.
26 A Case of Pulmonary Tuberculosis. J. R. Morrison, Louisville.
27 Advancements in Proctology. J. M. Mathews, Louisville.

Illinois Medical Journal, Springfield

February

28 Treatment of Compound Fractures. E. H. Ochsner, Chicago.
29 *The New Pure Food Catsup; or, when is a Chemical not a Chemical? J. A. Wesener, Chicago.
30 *Preservation of Meats in Cold Storage. H. S. Grindley, Champaign.
31 Enactment of Food Laws, their Enforcement and Effect. T. E. Lannen, Chicago.
32 Flour Bleaching: It[illegible] l Production and Nutrition. G. L. T[illegible]
33 Malarial Fever. G. [illegible]
34 Acute General Periton[illegible] C. E. Beecher, Gilson.
35 Dangers of Prolonged Anesthesia. C. A. Finley, Galesburg.

29. **New Pure Food Catsup.**—Wesener sums up his paper as follows:

1. Sodium benzoate and benzoic [illegible] less active than the other substances used in [illegible] ood, and the benzoate is less active than the [illegible] l in making the pure food catsup, which it has been stated may be made without the use of chemicals.
2. By the use of sodium benzoate and benzoic acid, the flavor of the article preserved is not lost nor can any inferiority of the product be disguised.
3. The flavor produced by vinegar and spices is wholly artificial and does not retain much of the natural flavor of the product that is preserved. By this means it is easy to cover up inferiority and thereby deceive the consumer.
4 Changed conditions in economics have made it imperative for the manufacturer to prepare his food to reach the consumer in a sweet, wholesome and palatable state.
5. Sodium benzoate and benzoic acid for catsup do this far better and in a less injurious manner than the products that are now used and so extensively advertised in the manufacture of pure food catsup.

30. Published in the *Chicago Medical Recorder*, December, 1909, and abstracted in THE JOURNAL, Jan. 29, 1910, p. 410.

Southern Medical Journal, Nashville

February

36 Some Acute Abdominal Conditions Occurring in Very Young Infants. R. Winslow, Baltimore.
37 Transfusion in Pellagra: Report of Cases. H. P. Cole and G. J. Winthrop, Mobile, Ala.
38 Treatment of Pellagra. J. M. King, Nashville.
39 Treatment of Surgical Anemia. R. W. Billington, Nashville.
40 Pathology of Uncinariasis. N. Evans, Nashville.
41 Influence of Improper Training and False Teaching in the Evolution of a Neurosis. E. M. Hummel, New Orleans.
42 *Early Diagnosis of Gall-Stone Disease. J. E. Cannaday, Charleston, W. Va.
43 Syphilis. W. F. Glenn, Nashville.
44 General Surgical Anesthesia. L. W. Bauman, Nashville.
45 So-called R. H. Reflex Neurotic Symptoms, and the Psychic Factor. T. A. Williams, Washington, D. C.
46 Protection to the Perineum in Forceps Cases. E. B. Anderson, Chattanooga.

42. Published in the *Journal of the South Carolina Medical Association*, January, 1910.

Annals of Surgery, Philadelphia

February

47 Results of "Specific" Remedies in Diseased States Accompanied by Hypertrophy of the Thyroid. J. Rogers, New York.
48 *Operative Correction of Syphilitic and other Deformities of the Nose. J. R. Roberts, Philadelphia.
49 Rhinoplasty by Means of one of the Fingers. S. H. Watts, Charlottesville, Va.
50 Traumatic Lesions of the Atlas and Axis. S. J. Mixter and R. B. Osgood, Boston.
51 Atlo-Axoid Fracture Dislocation. L. S. Pilcher, Brooklyn.
52 Malignant Degeneration of Benign Diseases of the Breast. J. Speese, Philadelphia.
53 Acute Intussusception of the Ileum with Volvulus. C. L. Scudder, Boston.
54 *Method of Anastomosis between Sigmoid and Rectum. D. C. Balfour, Rochester, Minn.
55 *Excision of the Rectum for Cancer by the Perineal Route. C. H. Peck, New York.
56 *Treatment of Gangrene of the Foot by Arteriovenous Anastomosis. G. P. Muller, Philadelphia.

48. Abstracted in THE JOURNAL, July 31, 1909, p. 409.

54. **Anastomosis Between Sigmoid and Rectum.**—The procedure employed by Balfour may be described as follows:

1. The patient is placed in a high Trendelenburg position and a long median incision made between the umbilicus and pubes.
2. The intestines are carefully packed off above, leaving only the lower sigmoid exposed in the pelvis.
3. The affected portion of the bowel is liberated by lateral incisions through the peritoneum, especially through the outer leaf of the sigmoid, and a semilunar incision is made along base of bladder connecting the two lateral incisions.
4. Careful dissection is made of all the fat and glands as high as the abdominal aorta, the hollow of the sacrum being swept clean.
5. The inferior mesenteric and middle sacral arteries are ligated at proper points.
6. Two pairs of forceps are clamped on the bowel at a suitable distance below the tumor and two on the proximal side; the necessary amount of sigmoid with the tumor is excised, and the cut ends are sterilized.

A three-quarter inch rubber tube is passed into the lower segment of bowel until the end protrudes through the anus; the upper end with lateral eye is inserted into the proximal end of the sigmoid to a distance of some three inches. It is here secured by a transverse catgut stitch one-half inch above the cut end of the intestine.

8. Traction is made by an assistant on the end of tube projecting from the rectum, until the cut ends of the bowel meet, and the anastomosis is made by interrupted [illegible] catgut sutures with careful coaptatior [illegible]
9. Traction is again made on the tr[illegible] half-inch intussusception, this being aided by a few forceps on the distal fragment to steady it, and a second row of sero-muscular sutures is inserted.
10. The defect in the peritoneum behind, is remedied by sliding peritoneum and suturing, and finally the omentum is drawn down over the anastomosis, and if necessary secured by a catgut suture.
11. The abdominal wound is closed in the usual way. The rubber rectal tube remains in position about six days, or until the catgut suture is absorbed.

55. **Excision of Rectum.**—Peck claims that the perineal operation is considerably shorter and less severe than the combined operation and is applicable to a large number of low-lying growths. By leaving the bowel closed for from 2 to 5 days or even longer, healing without infection of at least the greater part of the wound can be obtained in many cases. Clean healing, by preventing inflammatory infiltration of the tissues about the sphincter, is probably a great aid in preserving a fair degree of control. The splitting of the anal segment posteriorly enables one to leave the anterior attachments of the sphincter undisturbed, and thus to protect at least a part of its nerve supply.

56. **Arteriovenous Anastomosis.**—Muller's patient had a gangrenous fifth toe, and gangrenous patches on the remaining toes. Under spinal anesthesia, end-to-end anastomosis was effected, by the Carel method, of the femoral artery and vein at the apex of Scarpa's triangle below the origin of the profunda femoris. Complete reversal was not attempted. The artery was moderately sclerosed. When the clamps were removed the vein was seen actively pulsating and continued to do so during the closure of the wound with catgut for the deeper tissues, silkworm gut for the skin. The leg and foot became warm, the leg red and the foot reddish purple in color. No visible pulsation of the veins was observed.

In 48 hours the foot was cold to the ankle, the leg being warm. On the third day a line of demarcation began to appear at the tibiotarsal joint. This became more marked in a few days and amputation at the middle third of the leg was advised, but the patient refused to have it done. For days the patient was absorbing toxin from the gangrenous foot and was gradually getting weaker. Then he became delirious and, permission being obtained from his relatives, the leg was amputated 4 inches below the knee. At this time, the posterior tibial and peroneal veins showed feeble but distinct spurts of blood. There were many unusually sharp oozers. The anterior tibial artery did not bleed. All the arteries and the external saphenous vein were thrombosed. The internal saphenous vein was patent. The flaps were loosely sutured together and drainage provided. There was much suppuration in the flaps, and despite energetic systemic stimulation, death occurred, apparently from exhaustion, nine weeks after the first operation.

Journal South Carolina Medical Association, Florence

January

57 Subcutaneous Plastic Surgery of the Nose. W. P. Porcher, Charleston.
58 Requisites for the Treatment of Psychoneuroses: Psychopathologic Ignorance and Misuse of Psychotherapy by the Novice. T. A. Williams, Washington, D. C.
59 Infantile Syphilis. W. P. Cornell, Charleston.
60 Nephritis. B. W. Hunter, Charleston.
61 Diagnosis of Typhoid. D. B. Frontis, Ridge Springs.
62 Prevention of Typhoid. J. Lyon, Greenwood.
63 Temperature in Typhoid. G. A. Neuffer, Abbeville.
64 Antiseptic and Eliminative Treatment of Typhoid. W. G. Houseal, Newberry.
65 Diet in Typhoid. R. E. Hughes, Laurens.
66 The Business Side of Medicine. T. H. Dreher, St. Matthews.
67 *Early Diagnosis of Gall-Stone Disease. J. E. Cannaday, Charleston, W. Va.

67. Published also in the *Southern Medical Journal*, February, 1910.

Journal of the Michigan State Medical Society, Detroit

February

68 Prognosis in Cardiac Insufficiencies. H. A. Freund, Detroit.
69 *Uterine Fibroids. R. R. Smith, Grand Rapids.
70 Urinary Infections, Treatment by Inoculations. W. T. Dodge, Big Rapids.
71 Mixed Toxins in Treatment of Sarcoma. F. W. Robbins, Detroit.
72 *The Cigar vs. the Cigarette. F. C. Kinsey, Three Rivers.
73 Specialism in Surgery. L. J. Hirschman, Detroit.
74 Senile Hypertrophy of the Prostate. D. Loree, Ann Arbor.

69. Abstracted in The Journal, Oct. 9, 1909, p. 1224.

72. **Cigar vs. Cigarette.**—Briefly, the results of eight experiments conducted by Kinsey showed *no arsenic* in cigarette papers, no opiates in cigarettes, and the smoke was found to be less toxic than that from cigars containing the same amount of nicotin.

Journal Tennessee State Medical Association, Nashville

February

75 Dissemination of Typhoid. R. L. Jones, Nashville.
76 Prognosis and Treatment of Typhoid. T. E. Abernathy, Chattanooga.
77 Treatment of Pelvic Inflammations. E. M. Sanders, Nashville.
78 Trachoma. C. B. Wylie, Chattanooga.
79 Eclampsia. C. L. Goodrich, Fayettesville.
80 Death from Ether Anesthesia. W. M. McCabe, Nashville.

Archives of Pediatrics, New York

February

81 *Medical Wo[illegible] of the Juvenile Court of Cook County, Chicago.
F. [illegible]hill and J. A. Britton, Chicago.
[illegible] Epidemic Poliomyelitis. S. Flexner and P. A.
consequently dim[illegible] York.
individual, which is[illegible]worm (*Hymenolepis Nana*) as an Intestinal
brought before the c[illegible]dren. O. M. Schloss, New York.
E. C. Jones, Philadelphia.
85 So-called Casein Masses in Infants' Stools. L. F. Meyer and J. S. Leopold, New York.
86 Apparatus for Collection of Feces and Urine from Infant Girls. H. J. Gerstenberger, Cleveland, Ohio.
87 Traumatic Esophageal Stricture in a Two-Year-Old Child. G. W. Ross, Port Ewen, N. Y.

81. **Work of the Chicago Juvenile Court.**—The main points in Churchill and Britton's paper are, briefly, the following: The children brought before the Chicago Juvenile Court, in the early years of their dependency, differ little in their physique from children living under more favorable conditions. The boys, as a rule, are taller, but less well-nourished and of smaller chest capacity. The girls are inferior in height, weight and chest capacity. The boys, in the latter half of their dependency, *e. g.*, from 9 to 12 years of age, and throughout their delinquency, are inferior in all respects, and their inferiority is more marked after the age of puberty. The same comment holds true for the girls during these same periods, until they reach 16, when they are equally as tall as, *and far heavier than, their more fortunately surrounded* mates, which superiority in physique, by its very attractiveness, is one of the main factors in causing their delinquency. All the children of both groups are remarkably free from organic disease. Considerable numbers present drawbacks to perfect physical health in the shape of enlarged tonsils, and probably adenoids, carious teeth, enlarged cervical glands and diseases of the ear. A small proportion, about one-sixth, have trouble with the eyes. This defective vision and the deafness resulting from enlarged tonsils, adenoid growths and ear disease, are defects more or less predisposing to delinquency by rendering school work more difficult, and the street life with its attendant evils, more easy and more attractive. The frequency of gonococcus disease among the older girls is merely an index of the prevalence of this infection among this particular class as a whole. The generally lowered tone of the delinquents, as manifested by diminished height, weight and chest capacity, probably plays *no part* in the production of delinquency, but is rather a result of the general life led by these children, the result of common causes leading also to mischievous, delinquent conduct, viz.: bad air, poor food, bad surroundings, smoking, drinking, etc.

Journal of Cutaneous Diseases, New York

February

88 The Lichen Group of Skin Diseases: A Histologic Study. J. A. Fordyce, New York.
89 *Grain Itch (Acaro-Dermatitis Urticarioides): Study of a New Disease in This Country. J. F. Schamberg, Philadelphia.

89. Abstracted in The Journal, Aug. 14. 1909, p. 573, and published in the *Southern California Practitioner*, August, 1909.

Detroit Medical Journal

February

90 Sepsis of the Temporal Bone. D. M. Campbell, Detroit.
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Archives of Diagnosis, New York

January

93 Diagnosis of Duodenal and Gastric Ulcers. J. B. Philadelphia.
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97 Diagnosis of Disorders of the Cerebellar Apparatus. Williams, Washington, D. C.
98 Chancre Diagnosis. W. S. Gottheil, New York.
99 Laboratory Diagnosis of Syphilis with Demonstration Noguchi Modification of *the Wassermann Reaction.* Hulst and T. H. Dexter, Brooklyn.
100 *Simplified Method for Obtaining and Preparing Specin *Spirochæta Pallida.* B. G. R. Williams, Paris, Ill.
101 *Metallic Tinkling in Hydropneumothorax. J. H. I Pittsburg.
102 Modification of the Method of Making Wright's Blood R. Kilduffe, Philadelphia.

95. **Recognition of Tricuspid Disease.**—Stern is of the opinion that many instances of organic disease of the segments as well as of muscular or relative incompetence of the tricuspid valve are overlooked. When a patient is on his back and there is any tendency of distention of the jugular veins it will be evinced there and then. By lowering the head of the patient while he is still on his back, the jugular

veins become more distended, as a rule, and may begin to pulsate. Distention of the vein, or its pulsation, will increase in direct ratio to the lowering of the head, but when a certain point is reached, which is dependent on individual factors, the pulsation diminishes more or less and the engorgement may also recede. This lowering of the head, which in reality is but an extension, a stretching of the muscles of the neck, the veins, etc., is reflected in the tricuspid area, where murmurs are now noticed that were not perceptible before or which have been quite indistinct. The murmurs elicited while the patient is in this posture may be determined in accordance with the point of maximum intensity and the direction of transmission.

The examiner should stand behind the patient somewhat to the right of the head of the latter when an examining table is utilized. In case the examination is made in bed, the physician should be sitting at the right side of the head of the patient, who has been placed across the bed. In both cases the head of the patient should be supported by either the left hand of the examiner, or in advanced cases by both hands of an attendant. It should not be dropped at once over the edge of the examining table or bed, but should be brought down very gradually and be immediately elevated as soon as the dyspnea and the venous engorgement become excessive.

96. **Hemolytic Test in Cancer and Tuberculosis.**—It seems that in the blood serum of some cases of malignant disease—those generally associated with anemia and loss of weight—there exists a hemolytic property for alien red cells. It also appears that while this fact is interesting and may be of value in certain individual cases, similar manifestations are possible from the sera of patients non-cancerous. Smithies calls attention to this manifestation in cases of tuberculosis, syphilis and other disease conditions. It is noted, however, that the conditions in which this direct hemolysis is obtained are those frequently associated with anemia, loss of weight and cachexia. He has not noted that the reaction of reverse hemolysis mentioned by Crile as occurring in 92 per cent. of cases of tuberculosis is characteristic. It occurs occasionally, but is by no means characteristic, inasmuch as it also occurs in malignant disease, syphilis and other diseases. Smithies' work also shows that the transfusion of blood from one individual to another in cases of emergency is a dangerous procedure unless previously the hemolytic reactions of the two sera have been noted. In conclusion, he emphasizes that while the main mass of data is at present against the hemolytic reactions being characteristic for any single class of disease, yet the large number of cancer cases showing this reaction should urge us to seek modifications of the method in the hope that study of various sera along other lines will lead to the firm establishment of a specific reaction for cancer and other disease conditions which seem to have specific pathology.

100. **Examination of Spirochæta Pallida.**—The method described by Williams depends on two principles: First, that there are many spirochetes on the surface of every syphilitic ulcer, and second, that these show a preference for liquids, exhibiting a tendency to leave their host with the drawing off of certain liquids, properly applied. Williams first teases the surface of a mucous patch or cutaneous ulcer with a toothpick, or if he is dealing with a papule or chancre he scrapes it gently with a sharp scalpel. The fluid, a warm physiologic salt solution, is quickly dropped on the surface and as quickly withdrawn for examination. If the spirochetes are to be examined in motion, the salt solution should be warm when the suspension is made and examination done at once. This technic carried out in detail has enabled Williams to find dozens of spirochetes in one field. He is usually able to make a diagnosis in six minutes.

101. **Metallic Tinkling in Hydropneumothorax.**—In the light of experiments performed, Barach says that metallic tinkling in hydropneumothorax is produced most typically, and in all probability most frequently, by the escape of a bubble of air from the fistulous opening of a diseased lung, below or at the level of the liquid. When metallic tinkling is heard as the result of a bubble of air coming up through the effusion, the sound is not produced at the bursting of the bubble on the surface of the effusion, but with the separation of the bubble from the fistulous opening of the lung. Metallic tinkling can be produced by a bubble arising from the moist surface of a perforated lung above the level of the liquid, if the bubble is expelled with sufficient force. The characteristic qualities of the tinkling sound are determined by the density and size of the ring forming the fistulous opening, the expulsive force behind the bubble, the proportion of air and liquid in the chamber, the size and directness of the avenue of communication between the resonating chamber and the external atmosphere. Judging by the results of these experiments, Barach believes that the first three are the most potent factors in the production of typical metallic tinkling in hydropneumothorax. Metallic tinkling as heard in the chest is probably never caused by falling drops, an explanation which to the present has received the widest endorsement.

Medical Herald, St. Joseph

February

103 Dementia. G. H. Hill, Des Moines, Iowa.
104 *Splenectomy for Traumatic Rupture of the Spleen. W. B. Deffenbaugh, St. Joseph.
105 *Surgical Suggestions for Treatment of Chronic Appendicitis. A. I. McKinnon, Lincoln, Neb.
106 *Unrecognized Gall-Stone Disease. D. Morton, St. Joseph.

104. Abstracted in THE JOURNAL, Sept. 25, 1909, p. 1049.

105, 106. Abstracted in THE JOURNAL, Oct. 2, 1909, pp. 1126, 1127.

Journal of Advanced Therapeutics, New York

February

107 Effect of High-Frequency Currents in Diagnosis of Diabetes Mellitus. F. deKraft, New York.
108 Treatment by Electricity of Stiffened Joints. F. H. Humphris, London, England.
109 Relation of Physical Agents to Prophylactic Treatment. W. D. McFee, Haverhill, Mass.

St. Louis Medical Review

February

110 *Effect of Venereal Diseases on Women and Children. F. L. Bishop, St. Louis.
111 Effect of Venereal Diseases on Men. B. Lewis, St. Louis.
112 *Influence of Venereal Diseases on Conception and Heredity. F. J. Taussig, St. Louis.
113 Venereal Diseases and Blindness. J. Green, St. Louis.
114 *Physician's Relation to the Family in Prevention of Venereal Diseases. C. J. Luytics, St. Louis.
115 Venereal Diseases and the Social Evil. H. J. Scherck, St. Louis.

110. **Effect of Venereal Diseases on Women and Children.**—According to Bishop, 75 per cent. of all special and surgical operations performed on women are necessary because of gonorrheal infections. Thousands of women are not included in these figures because they do not come under surgical care, yet drag out a living death. Gonorrhea is credited with 80 per cent. of all inflammatory diseases peculiar to women. Of women infected by gonorrhea, 50 per cent. are rendered absolutely sterile; many others with gonorrheal infection are rendered sterile after birth of the first child—"one-child sterility." Sterile marriages are more often the result of incapacity than of choice. Syphilis has slain its thousands; 70 per cent. of children born of syphilitic parents died either before or shortly after puberty. Those who survive are often physical weaklings. The economic factors involved in the loss of health, of life, which these few but telling and undoubtedly conservative figures indicate, are items to be considered. The enormous outlay for medical and hospital care, the inability of women to be true homemakers because of impaired health, the discontent and discouragement because of sterility, the passing of domestic happiness, divorce—the real reason of which in many cases is the social disease—all indicate that these contagious and therefore preventable diseases should be studied both by the medical profession and the laity, and included in all public health education work.

112. **Influence of Venereal Diseases on Conception and Heredity.**—Taussig calls attention to one point often overlooked. Many of these women who are not infected at once, have one child and then become sterile. In fact, this "one-child sterility" as it is called, is considered by many to be characteristic of gonorrheal infection.

114. **Physician's Relation to Family in Prevention of Venereal Disease.**—The family physician as medical adviser, holds

56. **Arteriovenous Anastomosis.**—Muller's patient had a gangrenous fifth toe, and gangrenous patches on the remaining toes. Under spinal anesthesia, end-to-end anastomosis was effected, by the Carel method, of the femoral artery and vein at the apex of Scarpa's triangle below the origin of the profunda femoris. Complete reversal was not attempted. The artery was moderately sclerosed. When the clamps were removed the vein was seen actively pulsating and continued to do so during the closure of the wound with catgut for the deeper tissues, silkworm gut for the skin. The leg and foot became warm, the leg red and the foot reddish purple in color. No visible pulsation of the veins was observed.

In 48 hours the foot was cold to the ankle, the leg being warm. On the third day a line of demarcation began to appear at the tibiotarsal joint. This became more marked in a few days and amputation at the middle third of the leg was advised, but the patient refused to have it done. For days the patient was absorbing toxin from the gangrenous foot and was gradually getting weaker. Then he became delirious and, permission being obtained from his relatives, the leg was amputated 4 inches below the knee. At this time, the posterior tibial and peroneal veins showed feeble but distinct spurts of blood. There were many unusually sharp oozers. The anterior tibial artery did not bleed. All the arteries and the external saphenous vein were thrombosed. The internal saphenous vein was patent. The flaps were loosely sutured together and drainage provided. There was much suppuration in the flaps, and despite energetic systemic stimulation, death occurred, apparently from exhaustion, nine weeks after the first operation.

Journal South Carolina Medical Association, Florence

January

57 Subcutaneous Plastic Surgery of the Nose. W. P. Porcher, Charleston.
58 Requisites for the Treatment of Psychoneuroses: Psychopathologic Ignorance and Misuse of Psychotherapy by the Novice. T. A. Williams, Washington, D. C.
59 Infantile Syphilis. W. P. Cornell, Charleston.
60 Nephritis. B. W. Hunter, Charleston.
61 Diagnosis of Typhoid. D. B. Frontis, Ridge Springs.
62 Prevention of Typhoid. J. Lyon, Greenwood.
63 Temperature in Typhoid. G. A. Neuffer, Abbeville.
64 Antiseptic and Eliminative Treatment of Typhoid. W. G. Houseal, Newberry.
65 Diet in Typhoid. R. E. Hughes, Laurens.
66 The Business Side of Medicine. T. H. Dreher, St. Matthews.
67 *Early Diagnosis of Gall-Stone Disease. J. E. Cannaday, Charleston, W. Va.

67. Published also in the *Southern Medical Journal*, February, 1910.

Journal of the Michigan State Medical Society, Detroit

February

68 Prognosis in Cardiac Insufficiencies. H. A. Freund, Detroit.
69 *Uterine Fibroids. R. R. Smith, Grand Rapids.
70 Urinary Infections, Treatment by Inoculations. W. T. Dodge, Big Rapids.
71 Mixed Toxins in Treatment of Sarcoma. F. W. Robbins, Detroit.
72 *The Cigar vs. the Cigarette. F. C. Kinsey, Three Rivers.
73 Specialism in Surgery. L. J. Hirschman, Detroit.
74 Senile Hypertrophy of the Prostate. D. Loree, Ann Arbor.

69. Abstracted in The Journal, Oct. 9, 1909, p. 1224.

72. **Cigar vs. Cigarette.**—Briefly, the results of eight experiments conducted by Kinsey showed no arsenic in cigarette papers, no opiates in cigarettes, and the smoke was found to be less toxic than that from cigars containing the same amount of nicotin.

Journal Tennessee State Medical Association, Nashville

February

75 Dissemination of Typhoid. R. L. Jones, Nashville.
76 Prognosis and Treatment of Typhoid. T. E. Abernathy, Chattanooga.
77 Treatment of Pelvic Inflammations. E. M. Sanders, Nashville.
78 Trachoma. C. B. Wylie, Chattanooga.
79 Eclampsia. C. L. Goodrich, Fayettesville.
80 Death from Ether Anesthesia. W. M. McCabe, Nashville.

Archives of Pediatrics, New York

February

81 *Medical Wo[illegible] of the Juvenile Court of Cook County, Chicago.
F. S. [illegible]hill and J. A. Britton, Chicago.
[illegible] Epidemic Poliomyelitis. S. Flexner and P. A.
consequently dim[illegible] ork.
individual, which is[illegible]worm (*Hymenolepis Nana*) as an Intestinal
brought before the c[illegible]ldren. O. M. Schloss, New York.
E. C. Jones, Philadelphia.

85 So-called Casein Masses in Infants' Stools. L. F. Meyer and J. S. Leopold, New York.
86 Apparatus for Collection of Feces and Urine from Infant Girls. H. J. Gerstenberger, Cleveland, Ohio.
87 Traumatic Esophageal Stricture in a Two-Year-Old Child. G. W. Ross, Port Ewen, N. Y.

81. **Work of the Chicago Juvenile Court.**—The main points in Churchill and Britton's paper are, briefly, the following: The children brought before the Chicago Juvenile Court, in the early years of their dependency, differ little in their physique from children living under more favorable conditions. The boys, as a rule, are taller, but less well-nourished and of smaller chest capacity. The girls are inferior in height, weight and chest capacity. The boys, in the latter half of their dependency, *e. g.*, from 9 to 12 years of age, and throughout their delinquency, are inferior in all respects, and their inferiority is more marked after the age of puberty. The same comment holds true for the girls during these same periods, until they reach 16, when they are equally as tall as, and far heavier than, their more fortunately surrounded mates, which superiority in physique, by its very attractiveness, is one of the main factors in causing their delinquency. All the children of both groups are remarkably free from organic disease. Considerable numbers present drawbacks to perfect physical health in the shape of enlarged tonsils, and probably adenoids, carious teeth, enlarged cervical glands and diseases of the ear. A small proportion, about one-sixth, have trouble with the eyes. This defective vision and the deafness resulting from enlarged tonsils, adenoid growths and ear disease, are defects more or less predisposing to delinquency by rendering school work more difficult, and the street life with its attendant evils, more easy and more attractive. The frequency of gonococcus disease among the older girls is merely an index of the prevalence of this infection among this particular class as a whole. The generally lowered tone of the delinquents, as manifested by diminished height, weight and chest capacity, probably plays no part in the production of delinquency, but is rather a result of the general life led by these children, the result of common causes leading also to mischievous, delinquent conduct, viz.: bad air, poor food, bad surroundings, smoking, drinking, etc.

Journal of Cutaneous Diseases, New York

February

88 The Lichen Group of Skin Diseases: A Histologic Study. J. A. Fordyce, New York.
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Archives of Diagnosis, New York

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100 *Simplified Method for Obtaining and Preparing Specimens of *Spirochæta Pallida*. B. G. R. Williams, Paris, Ill.
101 *Metallic Tinkling in Hydropneumothorax. J. H. Barach, Pittsburg.
102 Modification of the Method of Making Wright's Blood Stain. R. Kilduffe, Philadelphia.

95. **Recognition of Tricuspid Disease.**—Stern is of the opinion that many instances of organic disease of the segments as well as of muscular or relative incompetence of the tricuspid valve are overlooked. When a patient is on his back and there is any tendency of distention of the jugular veins it will be evinced there and then. By lowering the head of the patient while he is still on his back, the jugular

Western Medical Review, Omaha

February

164 Management of Appendicitis. B. B. Davis, Omaha.
165 Hall County Medical Society. J. L. Sutherland, Grand Island.

Journal of Infectious Diseases, Chicago

March

166 *Venom Hemolysis. P. Kyes, Chicago.
167 *Morphology of Malarial Plasmodia after Administration of Quinin, in Intracorpuscular Conjugation. C. F. Craig, U. S. Army.
168 *Distribution of Antibodies and their Formation by the Blood. L. Hektoen and A. J. Carlson, Chicago.

166. **Venom Hemolysis.**—Kyes emphasizes the following points: There is present in all venoms a hemolysin existing as one of a number of distinct toxins; this hemotoxin affects hemolysis only in conjunction with a so-called complementing substance which, however, may be found within the erythrocytes; so far as at present recognized the activating substances are lecithins. The reaction between the hemotoxins and lecithin is essentially a chemical reaction resulting in the formation of a complete lysin, and this complete lysin is a true toxin in that it stimulates the production of a specific antitoxin.

167. **Malaria and Intracorpuscular Conjugation.**—The importance of intracorpuscular conjugation, aside from biologic interest, lies in its relation to prophylaxis, because if the conjugating organisms are the cause of relapse, it is necessary that treatment be instituted promptly and hence that infection be recognized as early as possible. The early recognition of malarial infection rests on microscopic examination of the blood, which should never be neglected in any patient suffering from fever. The prophylaxis of malaria especially in regions in which this disease is rare, usually rests with the attending physician, because the early recognition of the disease and the prompt institution of proper treatment will effectually stop its spread so far as that patient is concerned. A false diagnosis or improper treatment will result in the patient becoming a source of infection to the community in which he resides.

168. A summary of the chief results in this article was given in a similar article by the same authors in The Journal, Jan. 8, 1910, p. 130.

Colorado Medicine, Denver

February

169 Medical Aspects of Blood Pressure. O. M. Gilbert, Boulder.
170 Blood Pressure in Surgery. H. M. Cohen, Denver.
171 Blood Pressure from the Standpoint of the Ophthalmologist. E. Jackson, Denver.
172 Blood Pressure from the Neurologic Standpoint. G. E. Neuhaus, Denver.

Montreal Medical Journal

February

173 Spinal Anesthesia. W. W. Chipman, Montreal.
174 *An Apparatus for Rectal Anesthesia. E. M. von Eberts, Montreal.
175 The Tuberculosis Dispensary as an Economic Factor. J. H. Burland, Montreal.
176 Organization of the Board of Health of Montreal in Regard to Contagious Diseases. J. E. Laberge, Montreal.
177 *Peculiar Course of a Stab Wound of the Liver. J. C. Fyshe, Bangkok, Siam.
178 Extreme Malocclusion of the Teeth with Description of the Measures Taken for its Relief. J. S. Ibbotson, Montreal.

174. **Apparatus for Rectal Anesthesia.**—The apparatus devised by von Eberts consists of an outer jar (in this case a galvanic cell) containing an ether bottle, the space between the cell and the bottle being filled with water at a temperature of 90° F. Through the rubber cork in the bottle is passed a long glass tube connecting with an ordinary cautery bulb, while the second perforation in the cork is occupied by a short tube which provides for the exit of ether vapor. Between the bottle and the rectal tube is introduced a T-tube for the rapid relief of tension within the bowel or the attachment of an oxygen supply. Should the ether tend to rise in the bulb tube through back pressure, a pair of hemostatic forceps should be applied between the bulb and the bottle. The metal ring placed in the bottom of the jar not only holds the ether bottle in position but diminishes the chances of breakage when hot water is passed into the jacket. The metal cap provides passage on one side for the thermometer and on the other for a funnel when the addition of hot water is found necessary.

177. **Stab Wounds of Liver.**—In this case there were two parallel stab wounds just internal to the right nipple. They were two inches long and extended from the lower margin of the fourth rib down and inward in the direction of the external intercostal muscle. On reflecting the pectorals the fifth rib was found cut through twice, just internal to the costo-chondral junction. One cut was ¼ inch internal to the other and a small wedge of cartilage was cut out cleanly *in situ*. In the right pleura was a small amount of fluid blood. The right lung was healthy, slightly collapsed and showed no injury of any kind. The other thoracic viscera were normal. The diaphragm on the right side showed about the middle and corresponding in direction with the external wounds, an incision 2 inches long, the lower angle of which was 3½ inches away from the costo-phrenic junction in a straight line. In the abdomen was fluid and clotted blood. The right lobe of the liver was found to be stabbed right through from the diaphragmatic to the inferior aspect. The wound on the inferior surface was 1½ inches long and was situated just to the right of the foramen of Winslow. The cystic duct was nicked at the inner end of the wound. There was no damage to any part of the abdomen. The points of special interest are: (1) That the knife should have completely missed the right lung; (2) that a knife which made a wound 1½ inches long on the inferior surface of the right lobe of the liver in the position above detailed should have done no harm to the duodenum or upper pole of the kidney.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

February 26

1 *[illegible] Tuberculosis. A. G. R. Foulerton.
2 [illegible] Family Practice. H. B. Shaw.
3 [illegible] C. A. Mercier.
4 *[illegible] Its Diagnosis and Treatment. S. West.
5 *[illegible] of Fractures of the Leg. W. A. Lane.
6 *[illegible] Encysted Urinary Calculi. C. Dykes.
7 *Obstruction of the Small Intestine Caused by a Meckel's Diverticulum. G. H. Makins.
8 Sudden Deafness Occurring During Eclampsia. M. Yearsley.
9 *Cocain Poisoning. A. G. Gibson.
10 *Influence of Narcotics on Phagocytosis. L. Reynolds.
11 The Circulatory System (continued). H. Campbell.

1. **Streptotrichoses and Tuberculosis.**—After considering in some detail the general characteristics of the streptotricheæ and the pathology of the infections which they cause, Foulerton deals with the evidence which is available in support of these two propositions: (1) That under the name of "tuberculosis" there are commonly included infections caused by more than one species of parasite; and (2) that the parasites, generally reputed to be bacilli, which are the cause of tuberculosis, belong in reality to a higher group of organisms and should as streptotricheæ be included with the hyphomycetes, or mould fungi. This class of infections has a wider interest because of the apparent affinity between certain undoubted species of streptotricheæ and the parasite, or parasites, of tuberculosis. Foulerton's investigations into the pathology of streptothrix infections, together with much work bearing on the subject which has been carried out elsewhere, have led directly to a very definite conclusion as to the relationship, amounting to actual generic affinity, between this class of infections and those recognized under the name of tuberculosis. And further, systematic comparison of the biologic characteristics of the recognized streptothrix organisms on the one hand and of different "strains" of the parasite of tuberculosis on the other, he says, leaves no doubt as to the correctness of the opinion held by certain earlier pathologists who, within a few years of Koch's announcement of his discovery of the cause of tuberculosis, maintained that the reputed bacillus was not a fission fungus at all, but rather belonged to a higher group of mould fungi.

4. **Treatment of Serous Pericardial Effusion.**—West holds that paracentesis is rarely necessary, for serous effusions in the course of rheumatic fever usually disappear spontaneously, [illegible]ften produce no urgent symptoms. Absorption, when it

once begins is rapid, more rapid than in the pleura. The effusion is, no doubt, removed in the same way, by the lymphatic pump, worked by the respiratory movements on the one side and by the cardiac on the other. Exploratory punctures may be made in any place if the physical signs suggest it. In an ordinary case, when the diagnosis is clear and there is choice of place given, the sites selected and advocated have been four: 1. In Sibson's notch—*i. e.*, in the third left intercostal space near the sternum—a dangerous place on account of the proximity of the left auricle. 2. In Rotch's angle, in the fifth right intercostal space, to the right of the sternum—another risky place, because the right auricle cannot be far away, even if the effusion be of large size. 3. The fifth space to the left of the sternum. This spot is advocated because the puncture is made in the spot which is not covered with lung, and so the pleura is not perforated. Though this may be a good place for trephining the thorax with a view to incising the pericardium, it is not the best place for paracentesis. Nor need the risk of puncturing the pleura with the needle or with a fairly large trocar and cannula be seriously considered. In paracentesis the mere perforation of the pleura on the way to the pericardium does no harm. 4. The safest place is the fifth or sixth intercostal space outside the lept nipple line, but well within the area of the dulness, for here, owing to the displacement of the heart upward and the distention of the pericardium outward, is the widest space between the heart and the seat of puncture. All the fluid that can be obtained should be removed. Often it does not reaccumulate, but if it should a second and third paracentesis may be performed or as many as necessary.

5. **Singular Combination of Fractures of the Leg.**—The case reported by Lane illustrates the association in the same subject of an abduction fracture of the ankle-joint, or, as it is more commonly called, Pott's fracture, with a spiral or torsion fracture of the tibia. The patient, in an athletic mood, arranged to jump over a flower-bed. He slipped, twisting his foot very painfully as he approached it, and apparently leaping off the normal leg landed on the damaged one which he felt break with his weight. Lane regards it as being clear that the spiral fracture of the lower end of the fibula was broken by the excessive abduction of the foot, while the tibia yielded to the torsion to which it was exposed when he landed on the foot already over-abducted because of the fracture of the fibula.

6. **Patent Urachus and Encysted Urinary Calculi.**—The patient was apparently healthy apart from his urinary complaint, which dated back some five years or more. Several small concretions lay free on the base of the bladder but on commencing to crush the first, the beak of the lithotrite impinged on what appeared to be a much larger calculus occupying a position at the apex of the half-distended bladder. After the first stone had been crushed the projecting portion of this larger calculus was easily seized between the blades of the lithotrite, but was found to be fixed to the bladder wall. To crush this calculus *in situ* appeared dangerous, if not impossible, so Dykes performed lateral lithotomy, and the forefinger passed into the bladder. The calculus was now found just within reach of the finger. With the forefinger on the tip of the calculus, and the other hand on the abdominal wall it was estimated to be of considerable size, and its upper portion seemed very close under the examining hand beneath the abdominal wall in the middle line. It was evidently an hour-glass stone, the deeper half being considerably larger than the projecting portion felt by the finger. The projecting portion being steadied in the grasp of lithotomy forceps the perforated end of a long probe was insinuated alongside the neck and gradually maneuvered round the whole circumference, loosening the retaining tissues till by gentle traction and rotation of the forceps an "hour-glass" calculus was safely delivered. A second calculus immediately dropped from the same pocket into the bladder cavity. It, together with the three small concretions, the presence of which on the bladder floor had already been detected, was now removed, and the debris of the small stone first crushed, washed out. In case other concretions might still be lying in the pocket, its recesses were explored by a probe. Nothing further was found, but the probe passed up in the middle line, easily palpable through the abdominal wall to a point two inches below the umbilicus. At the upper end the pocket seemed to be contracted to a mere sinus. Convalescence was rapid and uncomplicated.

7. **Obstruction of Small Intestine.**—This case is of some interest from the points of view of diagnosis and pathology. The history provided none of the special features of obstruction from a Meckel's diverticulum, except the obviously mild nature of the constriction, since flatus was passed throughout. On the other hand, the history of the initial pain and malaise, continuing for two days, followed by the development of vomiting and constipation, suggested an attack of perforated appendicitis, while this theory was supported by the character of the abdominal distention, the tendnerness beneath the left rectus, and the fulness in Douglas' pouch, all of which suggested that the obstruction was symptomatic and depended on the presence of pus in the pelvis. The pathologic interest Makins believes lies in the fact that the condition forms another link in the chain of resemblance between the possible accidents to which both Meckel's diverticulum and the appendix are alike liable.

9. **Cocain Poisoning.**—In this case the symptoms of poisoning manifested themselves after two applications of a 2 per cent. solution of cocain to the throat and tonsils made within an hour.

10. **Influence of Narcotics on Phagocytosis.**—From experiments performed by him, Reynolds concludes that morphin exerts a marked influence on the leucocytes. Not only does it check diapedesis, but phagocytosis is diminished in a marked degree. The growth of bacteria, on the other hand, is not appreciably affected. What bearing has this on the practice of medicine and surgery? It is probable that in most surgical operations a certain number of pathogenic organisms gain entrance to the wound, however carefully asepsis be observed. The further history of the case turns on this point. Will the phagocytes be able to destroy these bacteria before the latter have multiplied sufficiently to gain the upper hand? If morphin temporarily paralyzes the activity of the phagocytes, if this drug be given time is lost during which the bacteria multiply. When the narcosis passes off the phagocytes may be unable to destroy the bacteria on account of their number and the paralyzing effect of the toxins produced by them; in fact by giving the morphin the chances of sepsis have been increased.

British Medical Journal, London

February 26

12 *Conditions which Simulate Dyspepsia. R. Hutchinson.
13 *Medical Treatment of the Poor. J. C. McVail.
14 Vaccination in India. A. Buchanan.
15 *Afebrile Erysipelas. W. C. Macaulay.
16 Operation for Elephantiasis of the Scrotum. F. A. Baldwin.
17 *The Intestinal Stitch. E. K. Herring.
18 The Cerebellum and its Diseases. J. S. R. Russell.

12. **Conditions Simulating Dyspepsia.**—Hutchinson describes cases in which the patients are believed to be suffering from gastric disorder when they are either not so at all or only secondarily, the gastric symptoms being due to some other disease, proving that when a patient complains of gastric symptoms, the other organs must also be investigated.

13. **Medical Treatment of the Poor.**—The proper feeding and rearing of pauper children, the control of boy labor, the decasualization of labor, labor bureaus, unemployment insurance, detention colonies for the vicious and the lazy, and for weak-willed ne'er-do-wells, the safeguarding of imbecile or feeble-minded young women by similar detention, the enforcement of every practical check on alcoholic indulgence—all these and other agencies have to be thought of as part of any sufficient plan of reform. Improvement in the general conditions of life and work resulting from such measures would quickly add to the numbers who would be in a position to become paying members of provident institutions. So long as human nature remains what it is, no panacea for all its defects can be found, but the simultaneous operations of agencies regarding whose value there is practically unanimous agreement, will do much in the desired direction. One of

these agencies will be better preventive and curative medical treatment of the poor, and in whatever way that be achieved, consistently with the preservation of individual responsibility, it will play an important part in the advancement of the national welfare.

15. **Afebrile Erysipelas.**—The two cases reported by Macauley appear anomalous in that in both the temperature was for the most part subnormal and in both the cerebral symptoms were early and profound. The latter manifestation was perhaps due to the fact that there was very little effort on the part of either patient to combat the disease—the one being an elderly man of enfeebled constitution, and the other an infant 3 weeks old. The diarrhea in one case also appears unusual, constipation being the rule. It probably indicated a profoundly toxic condition.

17. **The Intestinal Stitch.**—Herring attempts to show that the Lembert, Cushing and Halstead intestinal stitches are theoretically at fault. Experience teaches that they will each make a good union, but that is not the point. These faulty methods, he declares, should be banished or else put quietly into the background and some stitch more nearly approaching the ideal given the place of honor. He lays down four fundamental principles which must be carried out in every method of stitching which aims at the ideal: (1) The stitches must not tear through; (2) broad surfaces of union must be brought together evenly; (3) the stitches must be buried; (4) the application must be simple. He pictures such a stitch.

Medical Press and Circular, London

February 23

19 *Diseases of the Larynx: Especially Hoarseness and Loss of Voice. H. W. Fitzgerald.
20 *The Cerebellum and its Diseases. J. S. R. Russell.
21 Operative Technic of Fractures of Femur. R. L. Joynt.
22 Modern Methods of Delivery in Contracted Pelvis. E. H. Tweedy.

19. **Diseases of the Larynx.**—The following formulas for nose douches are used frequently at the Throat Hospital, Golden Square, London:

	gm. or c.c.			
Bicarbonate of soda,				
Biborate of soda, āā		20		gr. iii
Phenol		06	or	gr. i
White sugar		25		gr. iv
Water	30			℥i

This is used two or three times daily. Or:

Bicarbonate of soda,				
Biborate of soda,				
Chlorid of soda, āā		15	or	gr. ii
White sugar		30		gr. v
Water	30			℥i

Or, insufflation, such as:

Menthol		50	or	gr. viii
Iodol	5	30		gr. lxxx
Boric acid in fine powder	15	30		gr. cc
White sugar	30			℥i

Gargles, such as:

Chlorate of potash		65		gr. x
Alum		25	or	gr. iv
Glycerin		65		gr. x
Water	30			℥i

To spray or gargle the throat three or four times daily. Or:

Borax	1	6		gr. xxiv
Glycerin,			or	
Tincture of myrrh, āā	1	6		m. xxiv
Water	30			℥i

Mild alkaline astringent.

20. Published in *British Medical Journal*, Feb. 26, 1910.

Clinical Journal, London

February 23

23 Acute Polioencephalomyelitis. F. E. Batten.
24 Practical Hints for Consumptives. M. Paterson and F. C. Shrubsall.

Journal of Tropical Medicine and Hygiene, London

February 15

25 Relationship of *Microfilaria Diurna* to *Filaria Loa*. D. Burrows.
26 Filariasis in the Ikotekpene District, Southern Nigeria. P. F. Foran.
27 Account of Some of the Helminths Occurring Among South African Natives (continued). G. A. Turner.

Journal of Obstetrics and Gynecology of British Empire, London

February

28 Ovarian Tumor Complicating Pregnancy, Labor, and the Puerperium: Eight Recent Cases; Special Reference to Treatment. G. B Marshall.
29 Histologic Changes Associated with Early Abortion; Special Reference to Vessels of the Decidua. B. P. Watson and H. Wade
30 Wertheim's Operation, Followed by Uremia. A. Donald.

Intercolonial Medical Journal, Melbourne

December

31 Necessity for Organization in the Medical Profession. R. Worrall.
32 Tubal Pregnancy. G. Horne.
33 Estimation of Cranial Cubic Capacity and the Correlation of Size of Head to Intellect. J. H. Anderson.
34 Application of Craniology to Clinical Medicine. J. W. Barrett and W. F. Ore.

Bulletin de l'Académie de Médecine, Paris

February 15, LXXIII, No. 6, pp. 137-184

35 *Superheated Air in Treatment of Gangrene. M. Dieulafoy.

35. See abstract No. 43 below.

Bulletins de la Société de Pédiatrie, Paris

January, XII, No. 1, pp. 1-82

36 *Test of Time Required for Passage of Food through Infant's Gastrointestinal Canal. (Passage du carmin à travers le tube digestif des nourrissons.) Nobécourt and P. Merklen.
37 *Pseudoachondroplasia. A. Mouchet and Séguinot.
38 Favorable Outcome of Plastic Operation on the Pylorus in Young Infant. (Résultat éloigné d'une pyloroplastie pour sténose hypertrophique du pylore chez un nourrisson de deux mois.) H. Dufour and P. Frédet.
39 *Lymphosarcoma of Glands and Testicles. P. Lereboullet and A. P. Marcorelles.
40 Two New Cases of Bacterial Meningitis without Cellular Reaction. E. Lesné and L. G. Simon.
41 *Alkaline, Neutral and Acid Reactions of the Stools and their Importance in Infant Pathology. H. Triboulet and Trousseau
42 *Ulceration of Iliac Artery in Contact with a Drain. (Nouveaux cas d'ulcération des vaisseaux iliaques externes au contact des drains.) Savariaud.

36. **Time Required for Passage of Food Through Infant's Gastrointestinal Tract.**—About 1 grain of pulverized carmin was given to the infants as they were nursing, and the time of the appearance and disappearance of the stain in the stools was recorded. The infants were between 4 days and nearly 3 months old and were breast-fed and normal. The stools may show the stain in from 3 to 10 hours, and the stain may persist for a variable time; it never lasted longer than 21 hours in 8 of the 10 tests reported. The method is valuable for marking the stools from a certain feeding.

37. **Pseudoachondroplasia.**—The girl of 14 in the case reported presented a malformation with certain points in common with and others differing from true achondroplasia, dysplasia of the bones and what is called fetal rachitis.

39. **Lymphosarcoma of the Glands and Testicles.**—Lereboullet reviews the clinical data and autopsy findings in the case of a boy of 14 with malignant degeneration of both testicles, the histologic features of which do not concord with any known species of cancer. The inflammatory and sclerous elements associated with the neoplastic tendency, the prevalence of giant cells and the positive response to the cutaneous and intradermal tuberculin tests, suggest that tuberculosis may have been the primal cause of the lymphosarcoma in this case. The localization of the lymphosarcoma in the testicles and dura mater induced a special and deceptive syndrome, the numerous tumefied glands and spasmodic paraplegia suggesting an unmistakable tuberculous affection at first until microscopic examination of an excised gland threw doubt on its tuberculous character. The case was finally classed as an instance of the neoplastic reaction of the tissues to the tubercle bacilli to which Gougerot has recently called attention in his work on non-follicular bacillotuberculosis. Tollemer has reported a case of lymphosarcomatosis starting in the tonsils in a girl of 9, which terminated fatally in 2 months, but with nothing to incriminate the tubercle bacillus.

41. **Diagnostic Importance of Alkaline and Acid Reactions of Infants' Stools.**—Triboulet has been testing the reaction of

infants' stools in a large number of cases, and has found that the stool of the normal breast-fed infant gives an acid reaction; a neutral or an alkaline reaction should be regarded as an index of pathologic conditions. The stool of the bottle-fed infant, on the other hand, is alkaline. A neutral or acid reaction with a bottle-fed infant, he asserts, indicates defective digestion. The digestive disturbances may be of various kinds, but the liver functioning is generally more or less at fault. It is this insidious insufficiency on the part of the liver, he says, which is responsible for so much of the acute disturbance in the serious toxi-infectious diseases, typhoid, pneumonia, etc. Reviewing the experiences at the clinic with measles in infants during the last year, he found an abnormal reaction in 91 per cent. of the fatal cases of measles; in 64 per cent. of the serious cases terminating in recovery, but in only 10 per cent. of cases of the mild forms of the disease. The predominance of an alkaline or acid reaction in the stools, corresponding to breast or bottle feeding, can thus yield important information in regard to the prognosis, etc. The tests are made with litmus paper.

42. **Ulceration of Iliac Vessels in Contact with a Drain Tube.**—Savariaud adds 7 new cases to one he has found on record in which the iliac artery or vein or both ulcerated in consequence of contact with a drain. Fatal hemorrhage resulted in some of the cases. Even a soft drain resting lightly on the vessels is liable to do harm.

Presse Médicale, Paris

February 16, XVIII, No. 14, pp. 121-128

43 *Superheated Air in Treatment of Gangrene. (Gangrène du pied et de la jambe chez un homme agé et diabétique.—Artérites oblitérantes.—Heureux résultats des applications de douches d'air surchauffé à tres haute température.—Appareil aéro-thermogénérateur.) M. Dieulafoy.

February 19, No. 15, pp. 129-136

44 Acute Chorea and Psychic Disturbances. Rémond and Voivenel.
45 Galvano-Ionic Medication. J. Larat.

43. **Superheated Air in Treatment of Gangrene.**—In one case reported, the patient was a man of 64, diabetic for 20 years, and the gangrene of the leg was evidently the result of obliterating arteritis. As the urine contained 27.45 gm. of sugar and 13.92 gm. of acetone to the liter, and the pulse was weak and at 140, amputation was out of the question. The patient's strength was kept up by yolks of eggs in bouillon, given by the spoonful, with other suitable measures, alkalines, etc., and a jet of superheated air was played on the gangrenous limb. The aero-thermo-generator, as Dieulafoy calls the apparatus devised for the purpose, is attached to the electric light wire. It can heat the air to 700° C. and force it out in a strong jet. After a week's application of the hot air douches, with the air at 300° C. on the gangrenous parts and 80 to 100° on the sound parts, each daily sitting lasting from 30 to 45 minutes, conditions began to improve and by the end of the third month the local and general improvement had reached a point when amputation could be successfully done. The hot air practically cooked the tissues, keeping the gangrene dry and the tissues mummified. The applications were not very painful, the patient standing them well. In a second similar case not treated with the hot air, the gangrene was oozing and the process became infected, causing threatening complications. The hot air treatment, the author asserts, prevents such secondary mishaps. The lesions of obliterating arteritis and senile changes seemed to be identical in both cases.

Revue de Chirurgie, Paris

February 10, XXX, No. 2, pp. 135-326

46 *Technic of Colopexy for Prolapse of the Rectum. E. Quénu and P. Duval.
47 *Echinococcus Disease in the Lung. (Kystes hydatiques du poumon.) Tuffier and J. Martin. Commenced in No. 1.
48 *Hematoma in the Mesentery. (Les kystes sanguins du mésentère.) L. Timbal. Commenced in No. 1.
49 *Modern Treatment of Popliteal Aneurisms. (Revue critique sur le traitement moderne des anévrismes poplités.) E. Quénu and C. Muret.

46. **Colopexy for Rectal Prolapse.**—Quénu and Duval give an illustrated description of the technic they have applied in 3 cases with satisfactory outcome, urging the superiority of the colopexy over other means of correcting prolapse of the rectum of abdominal, congenital origin. When the prolapse is of perineal origin, suture of the levator muscles, combined with recto-syndesmopexy, according to the technic previously described by Quénu, answers the purpose. With the colopexy the pouch of Douglas is obliterated and then a row of sutures is applied to fasten the pelvic colon to the rear aspect of the bladder, to the left pelvic peritoneum and the iliac peritoneum.

47. **Echinococcus Disease of the Lung.**—Tuffier and Martin present data to demonstrate that echinococcus disease of the lung may present itself under the guise of tuberculosis, pleurisy or pneumonia; there is no pathognomonic sign but presumptive evidence is afforded by polycythemia with from 5,800,000 to 6,890,000 reds and 10,000 or 15,000 whites—polynuclears with eosinophilia of 4 or 8 per cent. Roentgen-ray examination confirms the presumption of a hydatid cyst as also fixation of complement in the hemolytic test. Without operative intervention fully half the cases of echinococcus disease of the lung terminate fatally, and the proportion of fatalities is even larger in the cases in which puncture is the sole reliance. The most favorable results may be counted on when the cyst is still closed. The authors have been unable to find on record any cases in which pneumotomy was required a second time for a hydatid cyst of the lung. They give brief details of 35 cases in which pneumotomy was done, including Steck's case reported in The Journal in 1898. There are only 2 deaths in the list and in one of these cases the cyst was not found; the patient in the other case succumbed to hemoptysis two months after pneumotomy for a suppurating cyst in the base of the right lung.

48. **Mesenteric Blood Cysts.**—Timbal concludes his article on this subject by extolling the method of opening the cyst and suturing the lips to the wound—marsupialization. He compares the results obtained by puncture, extirpation and marsupialization and reviews the symptoms and course. The tumor frequently may be the first sign of the development of the cyst; in other cases digestive disturbances may occur and then subside, only to return later with greater intensity—colics, vomiting and constipation—the attacks recurring at irregular intervals. A number of the patients were treated for dysentery, liver trouble, etc., years passing before the cyst was diagnosed and the patient cured at once by its removal. Pain was not experienced in 5 of the cases on record, but in 26 others it was severe, paroxysmal or continuous, indicating compression of organs or nerves, with resulting functional disturbances. The genital functions are frequently disturbed, menstruation becoming painful and irregular or being suppressed altogether. The cyst is generally median and in the region of the umbilicus and extremely movable. A spontaneous cure is recorded only in 2 of the total 32 cases he reviews.

49. **Treatment of Popliteal Aneurism.**—Quénu and Muret analyze the recent literature on the subject of surgical treatment of aneurism, comparing the various technics. Their conclusion is that for the majority of cases Matas' endoaneurismorrhaphy, described in The Journal, Sept. 29, 1906, p. 990, and Nov. 14, 1908, p. 1667, is the superior technic as this permits individualization of measures to suit the special conditions exposed when the vessel is opened. Goyanes' method may possibly have a future, they say; this makes a double anastomosis between the artery and vein, possibly excising or isolating the aneurism pocket.

Semaine Médicale, Paris

February 23, XXX, No. 8, pp. 85-96

50 Glandular Cancroid in the Breast, Affecting only the Skin, of Thirty Years' Growth. (Un épithélioma du sein à marche extrèmement lente, végétant depuis longtemps dans la peau, peut-il perdre ses caractères au point de simuler un cancer malpighien?) G. Caussade and L. Cotoni.
51 *Formaldehyd Sterilization by Slow Combustion of Straw. (Désinfection en surface de certains locaux par la combustion incomplète de la paille.) A. Trillat.

51. **Formaldehyd Sterilization by Slow Combustion of Straw.**—Trillat explains the mechanism by which the aldehyd and polyphenol substances generated in slowly burning straw result from oxidation of the gases of combustion acting on the hot straw charcoal. In his experiments he found polymerized formic aldehyd in the proportion of 0.2 to 2 gm. per kilogram of the straw by weight. The polyphenols generated

at the same time add their disinfecting action: other important factors in the sterilization are the high temperature and the presence of pyroligneous acid. All antiseptics, and especially formaldehyd, have a more powerful action in an acid atmosphere and at higher temperatures. He advises plugging all crevices and piling the straw in layers of dry straw alternating with damp layers. The temperature of the enclosure should be 87 F. at least, and it is best to set several of the straw fires at work at once. In a cellar of 140 cubic meters, 18 kilograms of straw were burnt thus and objects contaminated with diphtheria and colon bacilli were rendered sterile in less than two days and all but 1 in 12 tests with typhoid bacilli and 5 in 12 tests with anthrax spores. This method of sterilization is only adapted for cellars, sewers, tunnels, stables, etc., as the walls are slightly smoked. The sterilization is only superficial.

Archiv für Verdauungs-Krankheiten, Berlin

February, XVI, No. 1, pp. 1-120

52 *Dilatation of the Esophagus. (Erweiterungen der Speiseröhre.) F. Umber.
53 *Importance for Diagnosis and Treatment of Schmidt's Test Diet in Intestinal Disease. (Wert der Schmidtschen Probekost bei Darmkrankheiten.) W. Robin.
54 *Recurrences after Operative Removal of Gall-Stones. (Ueber Rezidive nach operativer Behandlung von Gallensteinen.) S. Mintz.
55 *Gall-Stone Colic with Movable Gall-Bladder. (Neue Form von Gallensteinkolik bei beweglicher Gallenblase.) M. Buch.
56 *Local Eosinophilia and Intestinal Disease Accompanied with Eosinophilia. J. Komarowsky.

52. **Dilatation of the Esophagus.**—Umber reports a typical example of the "pulsion" diverticulum and of diffuse dilatation in the upper and lower part of the esophagus. In the first case the father of the patient had a similar affection, confirming the congenital tendency to special weakness of the muscle at the junction of the pharynx and esophagus. The physiologic internal pressure in the esophagus, to propel the food along, causes protrusion of this part of the wall, with formation of a diverticulum in time. As it is due to the propulsion of the food, it is called a "pulsion" diverticulum. The disturbance in swallowing, regurgitation, tumor in the neck and murmur suggested the diagnosis, which was confirmed by Roentgen-ray examination. The case of diffuse dilatation illustrates, he states, that high degrees of ectasia may develop without primary stenosis, exclusively on the basis of a primary congenital atony of the wall of the esophagus.

53. **The Schmidt Test Diet for Diagnosis and Treatment of Intestinal Disturbances.**—Robin has been systematically applying Schmidt's diet in 42 cases during the last three years, and is convinced of its great importance for proper differentiation and treatment of chronic bowel trouble. He gives the details of six cases, each a type of various conditions, in which this method of testing the functioning gave useful information, leading to a complete cure of conditions which had previously resisted all kinds of treatment applied haphazard. Examination of the stools during the test ration supplied the clue to the disturbances, revealing the special elements in the food which the patient was unable to digest properly.

54. **Recurrence After Operative Treatment of Gall-Stones.**—Mintz reports two cases of unmistakable recurrence of gall-stones after removal of the gall-bladder and drainage of the ducts. He is convinced that surgical intervention should be limited to cases of gall-stones with suppurative inflammation of the gall-bladder and chronic obstruction of the common bile duct, and, under certain conditions, chronic serous cholecystitis.

55. **Gall-Stone Colic with Movable Gall-Bladder.**—Buch gives an illustrated description of a case in which two large stones filled the gall-bladder. The latter was movable and its movements were evidently responsible for changes in the position of the stones, their movements causing the severe colic.

56. **Local Eosinophilia and Eosinophilia with Intestinal Diseases.**—Komarowsky reviews recent research in this line, of which a large amount has been done in Russia, and reports two cases of amebic enteritis with local eosinophilia without general eosinophilia and without Charcot-Leyden crystals. In both cases the stools contained a little blood. In two other cases there was local eosinophilia accompanying severe colitis, the eosinophilic cells forming the main mass of the leucocytes in the intestinal mucopurulent secretion, but there were no Charcot-Leyden crystals. His conclusions are that the hemolytic processes and phagocytosis occurring in the intestine are sufficient to explain the intestinal eosinophilia. This throws light on the eosinophilia observed with parasitic affections. One of his cases may be regarded as belonging to the type of exudative eosinophilic proctitis, no actual ulcers developing.

Berliner klinische Wochenschrift

February 7, XLVII, No. 6, pp. 229-276

57 Congenital Defect in the Heart. (Fall von congenitalem Vitium.) F. Kraus.
58 *Antidiabetic Foods on the Market. (Ueber Diabetiker-Gebäcke des Handels.) A. Magnus-Levy.
59 *Early Syphilitic Jaundice. (Zur Kenntnis des Icterus syphiliticus praecox.) A. Buschke.
60 Origin of Emphysema of the Lung. (Entstehung des Lungenemphysems.) O. Bruns.
61 The Hufeland Centennial. (Hufeland und die Hufelandische Gesellschaft.) D. v. Hansemann. (Hufeland als Balneologe.) L. Brieger. (Hufeland und das Rettungswesen.) G. Meyer.

February 7, No. 7, pp. 277-324

62 *Rheumatic Polyserositis. (Ueber Polyserositis rheumatica.) E. Mosler.
63 *Prognosis of Carcinoma. L. Brieger.
64 [illegible] n of Motor Functioning of Stomach. [illegible] des Magens mittels Röntgenstrah-
65 Seroreaction in Syphilis. (Mitteilungen zur Wassermann'schen Reaktion.) R. Ehrmann and H. Stern.
66 Prevention of Prolapse of Iris after Cataract Operations. (Zur Verhütung des Irisprolapses nach der Staroperation ohne Iridektomie.) F. Geis.
67 *Action of Radium Emanations on Man. (Wirkung der Radiumemanation auf den Menschen. IV.) Loewenthal.
68 Action of Hydrochloric Acid on Albuminoids. (Weitere Beiträge zur Wirkung der Salzsäure auf die Arteigenheit der Eiweissstoffe.) J. Kentzler.
69 Advantages of Iodin for Surgical Sterilization. (Desinfektion der Haut mit Jodtinktur.) Federmann.
70 Prophylaxis of Typhoid. (Einiges über Typhus.) M. Klehmet
71 Microscopic Determination of Acidosis in Infants. (Zur Frage des mikroskopischen Nachweises der Säuglingsacidose.) G. Tugendreich.

58. **Antidiabetic Foods.**—Magnus-Levy has examined nearly four dozen different foods on the market advertised for diabetics, and he found that they frequently failed to conform to the alleged standard. He urges manufacturers to use greater care in insuring uniformity in their products. He advocates two kinds of bread as enough for all practical purposes: one with a maximal content of 30 per cent. starch, the other with 5 or 10 per cent. starch. Other ingredients should be proportionately 16—20 per cent. albumin; 12—14 per cent. fat; 2 or 3 per cent. ash (salt), with 1 to 3 per cent. cellulose and 30 per cent. starch.

59. **Syphilitic Jaundice.**—Bruns found leucin and tyrosin in the urine in a case of mild jaundice in the early phase of syphilis. This finding is characteristic of acute yellow atrophy of the liver, but the mild course of the jaundice in this case shows that a parenchymatous inflammation of the liver may occur and retrogress without leaving serious traces. It is possible, however, that the liver may prove less resistant thereafter. All Bruns' patients with syphilitic jaundice in the last two years have been examined for tyrosin and leucin, but this, with two infants with inherited syphilis, were the only ones giving a positive response.

62. **Acute Rheumatic Polyserositis.**—Mosler has encountered 15 cases during the last 18 months in which the serous membranes showed signs of inflammation in the course of an acute articular rheumatism, or the polyserositis developed with only slight involvement of the joints. In both forms the disease has a sudden onset, the pleurisy and pericarditis developing together and abruptly. The violent dyspnea and other symptoms observed are evidently the work of the pericarditis without effusion; the pleura generally has a bilateral effusion. In some of the cases the pleuritis and pericarditis are complicated with endocarditis developing with the others or not long after them. The pleurisy in these cases does not require tapping as the effusion generally subsides spontaneously and without production of linear adhesions, as also occurs with the pericarditis, but the inevitable myocarditis takes a longer time for its retrogression and usually entails mitral insufficiency. The prognosis is the more favorable the

longer the interval since puberty, the heart of the young feeling the deleterious influence of the inflammation more intensely. His patients were between 14 and 49; the 4 left with valvular incompetency were 14, 15, 20 and 34 years old. One patient, a boy of 16, died.

63. **Prognosis of Cancer.**—Brieger cites an example to show the valuable information to be derived from estimation of the antitryptic power of the blood serum in regard to the prognosis of cancer. In the case described it was 1 to 7 at first but dropped to the normal proportion, 1 to 4, after removal of the cancer. A few months later, however, the proportion rose to 1 to 8, testifying to the development of metastases, which soon became manifest on palpation. It was thus possible to detect the metastases by the antitryptic ferment test before any other signs revealed their presence. The principles and technic of the antitryptic test were given in The Journal, July 4, 1908, page 83.

67. **Action of Radium on Man.**—Loewenthal concludes from his observation and experimental research that the biologic action of radium and radium emanations is evidenced in an activation of the ferments in the body; he was unable to discover anything suggesting an antitoxic or similar influence.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

February 14, XIII, No. 2, pp. 49-80

72 Anatomic Anomalies in the Mesentery and Intestines. (In Sachen des Mesenterium commune und der Darmvarietäten überhaupt.) W. Koch. Commenced in No. 1.

Deutsche medizinische Wochenschrift, Berlin

February 17, XXXV, No. 7, pp. 297-344

73 *Transfusion and Venesection. (Transfusion und Aderlass.)* P. Morawitz. Commenced in No. 6.
74 *Successful Treatment of Nevus with Light and Radium in Forty Cases. (Behandlung der roten Muttermale mit Licht und Radium.) Kromayer.
75 Cobra Venom Hemolytic Test in the Insane. (Ergebnisse und neuere Untersuchungen über die Hemmungsreaktion im Blute von Geisteskranken.) W. Geissler.
76 *Angina Abdominis. S. Kreuzfuchs.
77 Benzidin Test for Blood in Forensic Cases. (Ueber die Verwendung des Benzidins für den Blutnachweis, im besonderen über seine *Anwendungsweise in der gerichtsärztlichen Praxis.)* E. Walter.
78 Spectrum of the Guaiac Test for Blood. (Spektrum der Guajakprobe.) K. Csepai.
79 Treatment of Arms Crushed between Rollers: Four Cases. (Walzenverletzungen.) Schmidt.
80 Cesarean Section in the Home. (Der Kaiserschnitt in der Praxis.) K. E. Laubenburg.
81 Serodiagnosis of Syphilis *in Official Regulation of* Prostitutes. (Die Serodiagnose im Rahmen der Prostituierten-Kontrolle.) H. Hecht.
82 Blood-Pressure-Raising Properties of the Serum in Beriberi. (Ueber adrenalinähnliche Wirkung des Blutserums von Beriberikranken auf das Froschauge.) J. Shimazono.

74. **Treatment of Nevus with Mercury Quartz Lamp and Radium.**—Kromayer reports 40 cases treated with one or both of these measures, the results showing that small, red arterial nevi respond favorably to radium treatment as its action is deeper than that of the lamp. But the latter is effectual for extensive reddish and purple nevi if they are superficial and are mainly the result of dilatation of the capillaries with slight involvement of the arteries. Moderately large, mixed nevi, the class which forms the majority of cases, require the combination of the light and radium treatment. He has never obtained any durable benefit from Roentgen-ray treatment, the difference between the radium and Roentgen rays being mainly in their various action on the vessels. The complete cures in a large number of his cases indicate that the quartz lamp and radium combination is a decided progress. Only a few of the 40 patients were *not* benefited by the treatment. He never makes more than 4 or 5 exposures with the mercury lamp nor more than 2 or 3 with the radium, *never* over an hour in length.

76. **Angina Abdominis.**—Kreuzfuchs describes the symptoms of abdominal *arteriosclerosis* as paroxysmal pains in the stomach region or elsewhere in the abdomen, especially around the umbilicus and tympany. The syndrome may be that of arteriosclerotic epigastralgia or true angina abdominis. In differentiation it is important that the attacks occur independent of the intake of food but are elicited by the factors which experience has shown induce symptoms in heart and vascular affections. Another point is that the abdominal angina is most liable to develop when the patient reclines. It is more common in men than in women, and most of the patients are over 40 or 50 years old. The *diagnosis* is confirmed by discovery of some other arteriosclerotic disturbance, or by the success of measures directed against arteriosclerosis. Intestinal hemorrhage and constipation are frequently observed; 4 of his 6 patients were great smokers. Ortner and Basch were able to induce spasmodic contraction of the intestines in animals by injection of nicotin. The prognosis of severe intestinal dyspragia is grave as it usually is the last link in a long arteriosclerotic chain. In one case the patient seemed to be much improved after a long series of cardiac symptoms when an attack of angina abdominis came on and death soon followed. The aim in treatment is to reduce the spasmodic contraction in the intestinal vessels; moist heat, hot drinks and physical measures are useful, but the sovereign measure is morphin. As there is danger of collapse as the spasm is relieved, he combines camphor with the morphin; there is little danger of morphin addiction as the prognosis of the affection is so grave in itself. The patients must guard against effort, "catching cold," and dietetic errors, and the bowels must be kept open, but laxatives and an anticonstipation diet must be given with caution as they are liable to bring on an attack; enemas must be the main reliance for this. The heart must be kept working well and physical measures are useful here, rather than haphazard digitalis medication. His experience, he states, confirms the benefits from cautious abdominal massage in regulating the conditions in the circulation in the intestines.

Deutsche Zeitschrift für Chirurgie, Leipsic

January, CIII, Nos. 3-6, pp. 203-624

83 Experimental and Literary Research on Mode and Routes of Propagation of Urogenital Tuberculosis. S. Sawamura.
84 *Experimental Production of Goiter. (Zur experimentellen Erzeugung der Struma, zugleich ein Beitrag zu deren His[illegible] [illegible]cher.
85 [illegible] in the Append[illegible] G. E. Konjetzny.
86 *[illegible] M. Makkas.
87 Acute Hemorrhagic [illegible] Brüning.
88 **Practical Importance of Indigo-Carmine Test of Kidney Functioning.* (Die Indigkarminprobe in ihrer praktischen Bedeutung für die funktionelle Nierendiagnostik.) W. Baetzner.
89 *Roentgen-Ray Treatment of Surgical Tuberculosis. *(Behandlung der Knochen- und Gelenkstuberkulose mit Röntgenlicht.)* H. Iselin.
90 Pathology and Surgical Treatment of Alveolar Emphysema *of the Lung.* D. G. Zesas.
91 Subtotal and Total Excision of the Scapula, *with and without* Retention of Arm. (Zur Kasuistik der Exstirpation des Schulterblattes.) K. Kawamura.
92 Successful Removal of Fibrosarcoma in Cauda Equina. M. Rosenfeld.
93 *Serotherapy of Suppurative Processes. (Die Serumbehandlung eitriger Prozesse.) E. Gergö.
94 Technic of Apper[illegible] aus dem Gebiet der chirurgischen [illegible] A. Ebner.
95 Stenosis of Large [illegible] Adhesions. (Ueber Dickdarmstenosen durch perikolitische Adhäsionen.) E. Hagenbach.

84. **Experimental Production of Goiter.**— This communication from Wilms' surgical service at Basel relates extensive experimental research which has confirmed the assumption that the drinking water in certain geological formations contains the substance which produces both goiter and cretinism. The experiments were made with dogs, rats, guinea-pigs and monkeys, and enlargement of the thyroid followed ingestion of water from certain springs in regions where goiter is endemic; goiter also developed in the animals when the residuum after filtration of such water was added to water from springs in other regions free from goiter. The fact that the thyroid is the one gland affected by this element in the water confirms the assumption that the element in question here is a poison rather than a microorganism. The special geological formations involved seem to be determined by this research.

86. **Operative Treatment of Nephrolithiasis.**—Makkas concludes from the experiences at Garrè's surgical service at Bonn that pyelotomy is the preferable operation in case of kidney stones, and that the wound heals without a fistula if certain precautions are taken, such as he enumerates.

88. **Chromocystoscopy.**—The indigocarmin test of kidney functioning was described in The Journal, Jan. 2, 1904, page 69. Its extensive use in Bier's surgical service at Berlin is here reviewed, the clinical history, operative findings and ultimate outcome in fifty cases being presented in detail. The

final conclusions are that the test is an essential and valuable acquisition for obtaining information in regard to the actual functional condition of the kidney in certain circumstances. It is the more valuable on account of the simplicity of the technic.

89. **Roentgen-Ray Treatment of Surgical Tuberculosis.**—This is the detailed report of the work in this line done by Wilms and under his direction, mentioned recently in The Journal, page 1014, abstract 74.

93. **Direct Serum Treatment of Suppurative Processes.**—Gergö describes the experiences in Dollinger's surgical service at Budapest with the injection of serum—Müller's antiferment treatment—in 160 cases. The principles and technic were mentioned in The Journal, Aug. 28, 1909, page 751. This physiologic treatment is said to have proved satisfactory in nearly every instance, and Gergö regards the method as destined to a brilliant future when further perfected. Its special field is for abscesses unless they are unusually extensive and deep or the patient much debilitated, in which case incision is necessary. Otherwise all that is necessary is to paint the outside with iodin, aspirate the contents of the abscess with a puncture needle and then inject pure serum, thus rinsing out the cavity, after which serum to an amount representing one-third or one-half the amount of abscess contents withdrawn is injected, and a scrap of gauze is laid over the puncture hole and held in place with a strip of plaster. An abscess containing from 1 to 5 c.c. of pus heals in 3 days; larger ones, containing from 20 to 50 c.c. of pus heal in about 11 days. The absence of a scar is one of the great advantages of the method, and the functional result is always better, as conditions are more physiologic. He has never encountered any signs of anaphylaxis and the abscess never progressed except in a single instance, in a very debilitated patient. The benefit is *apparent only when there is decided abscess* formation.

Medizinische Klinik, Berlin

February 13, VI, No. 7, pp. 249-292

96 *Scleroma. P. Gerber.
97 *Psychoneuroses: their Psychic Roots and Treatment. (Zwangszustände, ihre psychischen Wurzeln und ihre Heilung.) W. Stekel. Commenced in No. 5.
98 Protection of the Eyes Against the Ultraviolet Rays Unnecessary. (Ist Schutz der Augen vor ultraviolettem Licht notwendig?) Best.
99 *Diagnosis of Hysteria. S. Meyer.
100 Action of Nascent Carbonic Acid and Oxygen Baths in Nervous Conditions. (Wirkungen künstlicher Kohlensäure- und Sauerstoff-Bäder bei Nervenkranken.) F. Munk.
101 Syphilis in Rabbits. (Neue Untersuchungen über die Syphilis des Kaninchens.) M. Truffi.

96. **Scleroma.**—Gerber regards scleroma as an infectious granuloma, with the connective-tissue *shriveling following* directly on the granuloma without an intervening stage of ulceration. He gives a number of illustrations of the different types which it may assume in the upper air passages, mouth and nose, urging a combination of surgical and physical measures, Roentgen-ray and radium exposures, etc. The absence of ulceration helps to differentiate the scleroma from syphilis. It is most liable to be confounded with tuberculosis but the tissues are harder and the aspect is not that of a typical tuberculous process. No means are known, he declares, by which scleroma can be arrested, but repeated palliative measures may allow years of freedom from discomfort.

97. **Psychoneuroses.**—Stekel enumerates a number of typical cases of psychoneurotic obsessions which are liable to drive the victims to despair but which can be cured, he says, by study of the individual conditions, the trouble being always some conflict in the psychoemotional sphere, logical, but subconscious. By winning the patient's confidence, the physician can trace out the underlying bases for the obsession, and, once discovered, the cure is soon complete. He agrees with Freud that the underlying basis is of sexual origin, and even goes so far as to state that in this category should be included all the cases now labeled neurasthenia. Nothing more rejoices the soul of the physician, he declares, than to be able by appropriate treatment to restore to normal life and the joy of existence the victims of these "anguish neuroses." He suggests the term "parapathy" for all that we have hitherto called neuroses and neurasthenia, remarking that a new science and a new conception of ideas demand a new terminology. The nerves, as such, have nothing to do with neuroses. The constitution may pave the way for the development of neuroses, but certain conditions in the environment are the main factor.

99. **Differential Diagnosis of Hysteria.**—Meyer insists that it is impossible to exclude all organic affections, as the textbooks advise, in striving to differentiate hysteria. Attention should be directed to the features which distinguish the hysterical manifestations from those of like nature of organic origin. In recurring disturbances, a strict periodicity speaks strongly in favor of hysteria, as also a strictly regular rhythm. The influencing of the symptoms by emotions should not be regarded as a criterion of hysteria, as many organic affections are powerfully modified by emotions. The effect of medical measures is an important aid in differentiation but of still greater import is the absence of the ordinary influence of drugs. When a pain is not materially modified by antipyretics or morphin, its hysterical origin is more than probable. He urges the necessity for refraining from physical examination of patients suspected of hysteria; the stigmata are frequently suggested to the patient by the physician's *examination. It is impossible to examine thoroughly all the* organs of any living human being and unnecessary inspection and manipulations should be avoided, especially on suspicion of hysteria.

Münchener medizinische Wochenschrift

February 15, LVII, No. 7, pp. 337-392

102 *Hyperemic Treatment of Carbuncle on the Face. (Behandlung der malignen Gesichtsfurunkel.) W. Keppler. Concluded in No 8.
103 Ergograph Tests for Detection of Simulation or Aggravation of Paresis. H. Stursberg.
104 Photographic Registration of the Pulse. R. Ohm.
105 *Silver Carbonate Test for Uricacidemia. (Eine klinische Methode der quantitativen Bestimmung der Harnsäure im Blutserum.) P. Roethlisberger.
106 Nature of Virus of Acute Poliomyelitis. (Zur Natur des Virus der epidemischen Kinderlähmung.) P. H. Römer and K. Joseph.
107 *Habitual Torsion of Movable Cecum. H. Klose.
108 Thiosinamin Poisoning. (Ueber Thiosinaminvergiftung.) F. Hayn.
109 Tests for Levulosuria and Pentosuria. A. Jolles.
110 Two Cases of Miliary Tuberculosis Following Abortion. F. Weil.
111 Advantages of Exclusion of Sugar in Feeding Infants with Digestive Disturbances. (Behandlung von ernährungsgestörten Säuglingen mit zuckerfreier Kost.) P. Grosser.
112 Treatment of Whooping Cough with Quinin Salve applied to the Nasal Mucosa. (Zur Therapie des Stickhustens.) L. Berliner.
113 Technic of Intravenous General Anesthesia. L. Burkhardt.

102. **Congestive Hyperemia in Treatment of Carbuncle on the Face.**—Keppler reports further experiences with active hyperemia *applied to lesions on the head, his further experi*ence confirming the good results obtained four years ago, as mentioned in The Journal at the time, Feb. 10, 1906, p. 473, where his technic was also described. He has not modified the technic since, but declares that the benefit of constriction applied to the neck in treatment of lesions above makes necessary a revision of all previous therapeutic views in this field. Instead of mutilating surgical measures, all that is necessary is to remove the cap of the pustule, leaving the necrotic plugs until unmistakably loosened. Great care is taken not to injure the tissues, carefully avoiding squeezing out the pus. The carbuncle rapidly softens under the influence of the elastic band applied to the neck, but the most remarkable effect of the latter is the prompt subsidence of pain. The constricting band is worn 20 or 22 of the 24 hours, and even after the symptoms have subsided he keeps up the constriction for a few hours every day. The dread that some physicians have of applying constriction to the neck he regards as unfounded; extremely mild constriction answers the desired purpose, the vessels in the neck being so large in comparison with the muscles, that the conditions thus differ materially from conditions in the limbs. He retracts nothing from his first commendation of the method, but is even more emphatic. He applies the constricting band also for carbuncles on the back of the neck when they are located high enough to permit. The results were good in his 4 cases of the kind.

105. **Simple Test for Uric Acid in the Blood.**—Roethlisberger describes a method of determining the proportion of uric acid in the blood, which he states is extremely sensitive,

simple and reliable. It is based on the fact that uric acid reduces a solution of silver carbonate. To facilitate the test he uses a reagent paper, a silver carbonate paper, on which a drop of a 15 per cent. solution of sodium carbonate is placed and as soon as this has all been soaked up by the paper, a single drop of blood serum is placed in the center of the moist spot on the silver paper. After two minutes the paper is rinsed and then placed for five minutes in a solution of 1 part pure ammonia in 2 or 3 parts distilled water. The paper is then rinsed again, when it can be examined. After lying in the water-bath for a few hours, the paper can be dried and kept indefinitely. The only drawback to the test is that the whole procedure must be done in a dark room with red light or an electric 10-candle light at a yard distance, as the sensitized paper must be kept from contact with daylight. He gives illustrations of the reaction to show the scale. There is no trace of the spot in the absence of uric acid, but a faint spot is seen with 0.04 per thousand uric acid; the spot is more distinct with 0.08 per thousand, and quite a blotch with 0.12 per thousand. Only a few drops of blood from the finger tip are necessary; the serum separates on standing without centrifuging.

107. **Habitual Torsion of the Elongated Cecum.**—Klose distinguishes between the disturbances with an abnormally long movable cecum with chronic inflammatory conditions responsible for the stretching of the connective tissue, and that due to anomalies in development. This latter variety is much more frequent but has received little attention, and yet its non-recognition may lead to serious and possibly fatal trouble. The victim usually applies to one physician after the other, and finally comes to be regarded as a chronic neurasthenic or hysterical individual. An abnormally long cecum causes no disturbance in the majority of cases, but in others there are severe symptoms which Wilms ascribes to the length of the cecum but which Klose explains as a periodical or a constant relative or absolute torsion. These cases probably include all those in which the disturbances persist after appendicectomy for supposed chronic appendicitis. Klose has examined the records of operations for chronic appendicitis in which the report allows a suspicion of a movable cecum as a possible factor, and found many instances of persistence of the severe attacks of pain after the operation, just as before. In fully 25 per cent. of all cases of alleged chronic appendicitis the trouble in reality, he reiterates, is habitual torsion of an abnormally long, movable cecum. In the milder cases, not yet complicated by secondary adhesions, a tumor-like resistance can be felt, during the attack, in the region of the cecum, which can be pushed across the median line; the tumor may then disappear under pressure. Gurgling and rumbling noises can be heard on auscultation. This tumefaction, in connection with the lack of fever during the attack of pain, is the most important feature for differentiation. The severe cases are generally diagnosed as some form of stenosis, but Roentgen-ray examination has permitted the correct diagnosis in all his numerous cases in the last year. The main features of the attack are the colics with distention of the cecum, increased peristalsis, sounds on palpation, obstipation followed by diarrhea, and the pain from the tugging and distention with partial stiffness of the intestine, blood and mucus in the stool, with fermentation of carbohydrates, or ileus. He found the condition in children in about 13 per cent. of his total material and calls the attention of pediatrists to this fact, reporting two typical cases. The children are those suffering from constitutional or infectious injuries, or, as only children, held aloof from the healthy and strengthening exercises of normal childhood. Treatment should be intraperitoneal fixation of the cecum, fastening it to the peritoneum of the iliac fossa and the posterior lateral abdominal wall with silk button sutures of the serous surface. He regards Wilms' plastic operation as unnecessary. Wilms forms a pocket in which the cecum is placed by loosening a triangular portion of the peritoneum from the crest of the ilium. Simple intraperitoneal cecopexy, which Klose prefers, has the advantages of putting an end to the further torsion while preventing infection of the suture. In all operations on the appendix, he declares, an abnormally movable cecum should be fastened to hold it in place. The article is illustrated.

Therapeutische Monatshefte, Berlin

February, XXIV, No. 2, pp. 57-112

114 Arsacetin in Treatment of Pseudoleucemic Glandular Disease. (Ueber die Behandlung [Heilung?] pseudoleukämischer Drüsenaffektionen mit Arsazetin.) Naegeli.
115 *Glycerin in Treatment of Intestinal Nematode Parasites. (Das Glyzerin in der Behandlung der Anguillulose.) L. Preti.
116 Importance of New Aids in Diagnosis and Treatment of Syphilis. (Bedeutung der neueren Hilfsmittel für Diagnostik und Therapie der Syphilis.) L. Halberstaedter.
117 A Chemical Cause of the Clinical Action of Thiosinamin. E. Starkenstein.
118 Elimination of Bromin in Urine. (Uber die Ausscheidung von anorganischen und organisch gebundenem Brom durch den Urin nach Einfuhr organischer Brompräparate.) L. Bilinkis.
119 *"Extension Dressings" in Treatment of Fractures. (Ueber die [illegible] Extremitäten-Frakturen mit besonderer [illegible] Extensions-Verbände.) P. Bocken- [illegible] in No. 1.
120 Shoulder Arthritis Responsible for Neuralgiform Pain in Arm. (Omarthritis mit Brachialgie und ihre Behandlung.) A. Müller and Herzog.
121 Mercury Oxycyanid in Syphilis. (Zur Injektionsbehandlung der Syphilis.) Jessner.

115. **Glycerin in Treatment of Helminthiasis.**—Preti reports 3 cases in which the ordinary vermifuges entirely failed to relieve the patients of the *Anguillula intestinalis.* He finally succeeded in expelling the parasites by giving glycerin freely. The patients took 25 gm. of pure glycerin and the same amount in capsules, with 30 gm. by the rectum two hours later. Two days later the same procedure was repeated, and for the first time in years the stools were free from the larvæ. In one case, complicated with uncinariasis, the latter was cured by the ordinary treatment with male fern but the anguillula did not seem to be affected by it.

119. **Extension Dressings in Treatment of Fractures.**—Bockenheimer's article is accompanied by twelve illustrations showing the various types of dressings arranged to induce extension of the fractured limb while leaving the joints free. In the simpler cases the extension can be applied in the home by the family physician. Owing to the constantly increasing use of machinery, the greater devotion to sports, roller skating, automobiling, etc., fractures are becoming more common while better functional results are demanded than formerly were acceptable. For this, extension and early massage are almost indispensable, and the combination of extension with the dressings is proving very useful. In fracture of the upper arm, for instance, he applies a lengthwise strip of adhesive plaster on each side of the arm, extending below the elbow, the lower ends fastened each with an elastic band to a wooden crosspiece several inches below the elbow, which in turn is fastened to two wooden splints extending from the shoulder to several inches below the elbow, the hand resting in a sling. The upper arm is thus stretched constantly but with elastic force. Ideal retention without the slightest impairment of function is possible only with extension, he declares. He also insists that the patient must refrain from bearing weight on the leg in case of fracture of the thigh for at least 12 weeks and for 7 weeks in case of fracture below the knee. He also emphasizes the importance of having the patient wear a flat-foot insole for a year after any fracture of the leg below the upper third of the femur.

Wiener klinische Wochenschrift, Vienna

February 17, XXIII, No. 7, pp. 233-272

122 Virus of Acute Poliomyelitis and Preventive Inoculation. (Ueber das Virus der Poliomyelitis acuta, zugleich ein Beitrag zur Frage der Schutzimpfung.) R. Kraus.
123 *Coagulation of Blood During Menstruation. (Ueber Blutgerinnung während der Menstruation.) G. M. Cristea and W. Denk.
124 *Menstrual Changes in the Blood. (Ueber menstruelle Veränderungen des Blutbefundes.) A. Pölzl.
125 *Blood Findings with Abnormal Spleen. (Blutbefunde bei Milzerkrankungen.) L. Hess.
126 Experimental Research on Drainage. S. Boxer and J. Novak.
127 Dislocation of Ulnar Nerve. R. Porges and M. Jerusalem.

123-124. **Study of the Blood of Menstruating Women.**—The investigations of Cristea and Denk seem to have demonstrated that the blood undergoes no change in respect to its coagulating properties during menstruation, but that the uterine mucosa has the property of holding back the fibrin ferment. This renders the blood passing through this mucosa incapable of normal coagulation. Pölzl gives curves to show the regular increase in the numbers of red corpuscles a few days before the menses, the numbers diminishing again just before the onset of the menstrual hemorrhage. This may have something to do with the functioning of the ovaries, and the numbers of reds at this time may thus serve as an index of ovarian functioning. In examining the blood of menstruating women, the date of the examination, in connection with the menstrual period, should be borne in mind. It is possible that with the increased functioning of the ovaries just preceding menstruation, other organs, including the bone marrow, may feel a stimulus to more active functioning.

125. **Blood Findings with Chronic Enlargement of the Spleen.**—Hess gives the details of a number of cases of various affections of the spleen as observed at von Noorden's clinic at Vienna. He found unusually small numbers of leucocytes with enlargement of the spleen accompanying a primary neoplasm in the spleen, acquired syphilis, chlorosis and severe anemia, as also in Banti's disease. On the other hand, he says, the proportion of leucocytes was constantly normal in inherited syphilis, chronic malaria, chronic congestion of the spleen, splenic cirrhosis, polycythemia, wandering spleen, amyloid degeneration, tuberculosis of the spleen and metastatic tumors.

Zentralblatt für Chirurgie, Leipsic

February 19, XXXVII, No. 8, pp. 273-312

128 *Tannin Sterilization of the Skin. (Zur Hautdesinfektionsfrage.) A. Zabludowski.
129 *Hemostasis in Trephining. (Zur Technik der Blutstillung bei Trepanationen des Schädels.) Vorschütz.

128. **Tannin for Surgical Sterilization.**—Zabludowski comments on the yellow discoloration from the benzin-iodin method of disinfecting the hands and field of operation, which is its great drawback. The hands are liable to be irritated, besides. The acetone method or iodin alone is only for the field of operation and not for the hands. He proposes tannin for effectual sterilization, commending its vigorous and permanent action, while it is not irritating and water does not impair the effect. He uses the tannin in a 5 per cent. alcohol solution, and reports faultless results when the hands and field of operation were cleansed for two minutes with gauze dipped in this solution. In 32 major operations in which this technic was used, bacteriologic tests of the hands during and even 40 minutes after the operation showed that they were as clean as at first.

129. **Hemostasis in Trephining.**—The needle is passed through the tissues between the periosteum and the bone at the point that is to be the base of the flap; an attached contrivance fastens the tissues down to the needle, like a safety-pin clamp. This shuts off the blood supply to the flap. As the incision is carried further the soft parts are seized with special broad clamps, the row of clamps entirely encircling the incision. As the handles lie away from the wound they do not interfere with the operation. The article is illustrated.

Zentralblatt für Gynäkologie, Leipsic

February 19, XXXIV, No. 8, pp. 273-304

130 *Prophylaxis of Puerperal Fever. O. Pankow.
131 Differentiating Culture Medium for Streptococci. (Bemerkungen zu Fromme's Differenzierungsverfahren der Streptokokken mittels Lezithinbouillon.) A. Hamm.

130. **Prophylaxis of Puerperal Fever.**—Pankow reports disappointing experiences with nuclein injected to induce hyperleucocytosis after childbirth, also with injections of antistreptococcus serum.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 1, XXXI, No. 14, pp. 145-152

132 *Primary Abscess in the Spleen. (Due casi di ascesso primitivo della milza.) G. Belloni and C. Moschini.

February 8, No. 17, pp. 177-184

133 *Practical Applications of Iodoform-Glycerin in Surgical Lesions. D. Vandini.

February 10, No. 18, pp. 185-192

134 Examination of the Heart in Anemia. (Esame funzionale del cuore. Soffi anorganici e dilatazione cardiaca.) F. Pedrazzini.

February 13, No. 19, pp. 193-208

135 *Impossibility of Eradicating Malaria by Medical Means. (Sulla non guaribilita etiogenica della infezione malarica.) S. Mircoli.

February 15, No. 20, pp. 209-216

136 Unreliability of Skin Reaction in Typhoid. (Ricerche sulla cutireazione nella febbre tifoide.) P. Ciuffini.

132. **Primary Abscess in the Spleen.**—Belloni and Moschini report the favorable result of prompt operative intervention in a case of primary abscess in the spleen. The first symptoms were low fever, headache and pain under the seventh rib, radiating to the shoulder. In the course of two months increasing fever and chills compelled intervention and rapid recovery followed resection of two ribs to permit evacuation of pus from between the lobes of the lung, after evacuation of the pus in the spleen. In the other case, no operation was attempted, although subphrenic suppuration was suspected; autopsy revealed merely a small primary abscess in the spleen with abundant pleural effusion. Both patients were young men.

133. **Iodoform-Glycerin in Surgical Lesions.**—Vandini reports satisfactory results in treatment of all kinds of acute and chronic abscesses, tuberculous peritonitis, phlegmons, mastitis, and various medical affections with effusion. Extensive experience, he states, has confirmed the advantages of this simple treatment which renders mutilating operations unnecessary as a rule. He uses a mixture of 10 parts iodoform in 100 parts glycerin, which he injects through a wide puncture needle after he has withdrawn some or all of the contents of the abscess or other process. He has never found it necessary to make more than three or four injections; one is generally sufficient, as he shows by a number of examples reported. The method has also proved effective in his hands in inflammatory processes in the knee, in acute peritonitis, polyserositis, and in pleurisy with effusion.

135. **Impossibility of Freeing the Body from Malarial Parasites.**—Mircoli declares that the recurrences of malarial symptoms after 5 or 10, or even 20 years, in connection with other facts that he has observed, have convinced him that the present drug treatment of malaria is unable to free the system completely of the malarial parasites. They linger in some form and recurrences after 20 years are not very rare, nor even after 40. There are absolutely no data, he says, on which to base the assertion that the malaria germs can be totally eradicated. Like syphilis, trypanosomiasis and kala azar, malaria, according to Mircoli, is "etiogenically incurable." According to the place and the individual, prophylaxis against eventual recurrence should be by systematic arsenic medication, and this applies as well to non-malarial as to malarial regions. Among the facts cited to sustain these assertions is the case of a youth with malarial infantilism whose much enlarged spleen was removed. Not a trace of malarial parasites could be detected in the spleen, but the next day they were found in the blood. They must have been present in the spleen in some amorphous, invisible form. The possibility of the existence of the parasites in some form which escapes present means of investigation has been demonstrated by Marchiafava in cases of primary malarial infection in which the blood marrow failed to show the least trace of the parasites. Enlargement of the spleen indicates inevitably active malaria, Mircoli declares. The absence of demonstrable protozoa, however, is no evidence against their existence in some germinal stage or against their habitual, although possibly silent, revivification.

Policlinico, Rome

February 20, XVII, No. 8, pp. 227-258

137 High Fixation of Testicle in Treatment of Varicocele. (Nuovo metodo di cura chirurgica del varicocele.) M. Volpe.

Riforma Medica, Naples

January 31, XXVI, No. 5, pp. 113-140

138 Differentiation of Febrile Diseases. G. Lucibelli.
139 Arrow Poisons in the Congo. (Contributo alla conoscenza dei veleni delle freccie dell'Africa.) G. Vinci.
140 Asymmetry of the Breasts and Areolæ Early Sign of Pulmonary Tuberculosis. (La disuguaglianza della mammelle od anisomastia nella tubercolosi polmonare.) E. Cartolari and U. Gasperini.

February 7, No. 6, pp. 141-168

141 Pyloric Stenosis. A. D'Antona.
142 Advantages of Iodin in Surgical Sterilization of the Skin. (Sulla disinfezione della cute con la tintura di jodo alla Grossich negli interventi chirurgici.) U. Noferi.
143 Experimental Research on Syphilis in Rabbits. (Sifilide nel coniglio.) M. Truffi.
144 Modifications in Blood and Blood-Producing Organs during Experimental Typhoid. (Modificazioni subite dal sangue e dagli organi ematopoietici per azione della tossina tifica.) C. Lavatelli.

February 14, No. 7, pp. 169-196

145 Ischuria from Movable Kidney. (Su di un caso d'iscuria da rene mobile.) A. Vetri.
146 *Diagnosis of Syphilis by Staining Reaction. (La cromoreazione di Schürmann per la diagnosi della sifilide.) V. Chirivino.

146. **Staining Reaction in Diagnosis of Syphilis.**—*Chirivino* relates the results of application of Schürmann's staining technic in 80 persons with unmistakable syphilis and in 17 free from a history of syphilitic infection. The reaction was positive in 64 of the 80 syphilitics, including 6 with very old syphilis. Of the 17 free from a history of syphilis only one presented a positive reaction, and this patient had an infectious ulcerative process. The Wassermann reaction gave parallel findings with the staining test with a single exception. In one case, a medical student presented a lesion on the genitals which had the aspect of a primary syphilitic sore, but no spirochetes could be found in it and the stain reaction was negative; the further course of the case confirmed the negative diagnosis. Chirivino declares that the staining test is far simpler than the search for spirochetes and the Wassermann reaction, and therefore he commends it to the general practitioner as a simple and easy means of throwing light on the case in question, confident that it will prove reliable in at least 80 per cent. of the cases. The technic for the staining reaction was given in The Journal, May 15, 1909, page 1629. Chirivino summarizes it as follows: One drop of perhydrol is added to 0.1 c.c. of the serum mixed with 3 or 4 c.c. of physiologic salt solution. When this is all well mixed he adds 0.5 c.c. of the freshly made special reagent (0.5 parts phenol with 0.62 parts of a 5 per cent. solution of ferric chlorid and 34.5 parts of distilled water). With normal serum the fluid turns greenish and then bluish, but remains constantly clear. If the serum is from a syphilitic, the fluid turns a dark, opaque brown. The addition of another drop of perhydrol sometimes turns a dubious into a pronounced positive reaction. The reaction occurs within a few minutes; after 10 or 15 minutes even with a negative reaction the fluid assumes a brownish tint although still constantly transparent.

Hospitalstidende, Copenhagen

January 12, LIII, No. 2, pp. 41-80

147 Effect on the Insufficient Heart of Long-Continued Small Doses of Digitalis. (Om kontinuerlig Digitalispaavirkning af det insufficiente Hjerte.) V. Rubow. Commenced in No. 1.
148 Importance of Suturing Technic for Asepsis. (Bemærkninger om Suturteknikens Betydning for Saaraseptiken.) C. F. Heerfordt.

January 19, No. 3, pp. 81-104

149 The Granular Non-Acid-fast Form of Tubercle Bacilli. (Om den ikke-syrefaste Form af Tuberkulosevirus.) G. E. Permin.

January 26, No. 4, pp. 105-136

150 Analysis of Seven Cases of Lesions Involving the Lower Part of the Spinal Cord. (Lidelser i Rygmarvens nederste Afsnit.) A. Wimmer. Commenced in No. 3.

Hygiea, Stockholm

January, LXXII, No. 1, pp. 1-96

151 *Laws Regulating Digestion and Absorption of Food. (Lagbundenheter vid matsmältning och resorption.) Svante Arrhenius.
152 *Tumors in the Cerebello-Pontine Recess. (Om acusticustumorer.) F. Henschen.

151. **Laws Regulating Digestion and Absorption of Food.**—Arrhenius states that some of the investigators at Pawlow's laboratory, including London, appealed to him to study the results of their research on dogs with a Pawlow fistula to ascertain if there were not some special laws governing the phenomena observed. He gives the details of his methods of research and states that the data presented suggest a suspicion of certain simple mathematical laws to which all the phenomena observed seem to conform as he describes in detail, giving the formulas to embrace the factors of amount of ingesta, time of digestion, proportion absorbed, amount of gastric secretion, etc.

152. **Tumors in the Auditory Nerve.**—This comprehensive article is a sequel to one on the same subject published in the *Hygiea Festband* in 1908. Henschen here gives 11 tables, each with 35 columns, citing the minutest details in regard to the clinical data and autopsy findings in 140 cases of tumors found in the recess between the cerebellum, medulla and pons. The list includes 11 cases in which these tumors were merely one manifestation of a general neurofibromatosis. He gives a number of points useful for differentiation, calling attention especially to the sequence in which symptoms develop. Headache is generally the initial symptom, but disturbances in hearing, vertigo or difficulty in walking may be the first symptoms, less often, disturbances in vision occur. Examination of the ear is of great importance for determining the side on which the lesion is located. In 5 of the 25 cases in which the tumor was removed the results have been excellent. Even an early palliative operation has a beneficial action. It is remarkable that no well-authenticated case of a solitary tumor originating in any other of the cranial nerves except the auditory nerve is on record; the explanation for this, he thinks, is probably in the embryonal development. The auditory nerve tumors originate in the connective tissue in the fundus of the internal auditory meatus in or around the vestibular division of the auditory nerve. As they grow they extend into the space between cerebellum and pons and develop as true intracranial tumors. But this recess may also be the seat of tumors originating in other regions near by. The tumors are generally more or less spherical and easily shelled out, of a fibroid nature, and more or less benign growths.

Ugeskrift for Læger, Copenhagen

February 10, LXXII, No. 6, pp. 143-178

153 Treatment of Acute Otitis Media. (Behandlingen af den akute Mellemøresuppuration.) H. Mygind.

February 17, No. 7, pp. 179-198

154 Infant Mortality in Rural Districts. (Et Hjælpemiddel i Kampen mod Børnedødeligheden paa Landet.) A. Johansen.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THEORETICAL PRINCIPLES OF METHODS OF ANALYTICAL CHEMISTRY BASED ON CHEMICAL REACTIONS. By M. G. Chesneau, Ingénieur en Chef des Mines. Authorized Translation by Azariah T. Lincoln, Ph.D., Assistant Professor of Chemistry, Rensselaer Polytechnic Institute, and David H. Carnahan, Ph.D., Associate Professor of Romance Languages, University of Illinois. Cloth. Price, $1.75 net. Pp. 184. New York: The Macmillan Company, 1910.

PROGRESSIVE TAXATION IN THEORY AND PRACTICE. By Edwin R. A. Seligman, McVickar Professor of Political Economy, Columbia University. Second Edition. Price, $1.25. Paper. Pp. 334. (*American Economic Association Quarterly. Third Series, Vol. IX*, No. 4. Price, $4 per Year.) Princeton: American Economic Association, December, 1908.

THE CONQUEST OF CONSUMPTION. By Woods Hutchinson, M.D., Author of "Studies in Human and Comparative Pathology," etc., and Clinical Professor of Medicine, New York Polyclinic, etc. Cloth. Price, $1 net. Pp. 138, with illustrations. Boston: Houghton Mifflin Company, 1910.

EMERGENCY SURGERY. For the General Practitioner. By John W. Sluss, M.D., Professor of Anatomy, Indiana University School of Medicine. Second Edition. Flexible Leather. Price, $3.50 net. Pp. 747, with 605 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

ATLAS UND GRUNDRISS DER ZAHNÄRZTLICHEN ORTHOPÄDIE. Von Zahnarzt Emil Herbst, D.D.S., in Berlin. Lehmanns Medizinischen Handatlanten, Band XXVI. Cloth. Price, 14 marks. Pp. 395, with 438 illustrations. Munich: J. F. Lehmann's Verlag, 1910.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR 1909. Cloth. Pp. 274. Washington [Superintendent of Documents]: Government Printing Office, 1910.

JOURNAL AND PROCEEDINGS OF THE ROYAL SOCIETY OF NEW SOUTH WALES FOR 1908. (Incorporated 1881.) Vol. XLII. Edited by the Honorary Secretaries. Paper. Pp. 466. London: G. Robertson & Co., 17 Warwick Square, Paternoster Row, 1908.

SCIENTIFIC AND INDUSTRIAL BULLETIN OF ROURE-BERTRAND FILS of Grasse. October, 1909. Series 2, No. 10. Paper. Pp. 145, with illustrations. [E. H. Burr, Manager American Branch, 18 Cedar Street, N. Y.]

FOURTH BIENNIAL REPORT, OR THE TWENTY-THIRD AND TWENTY-FOURTH ANNUAL REPORTS, OF THE STATE BOARD OF HEALTH OF THE STATE OF KANSAS. From Jan. 1, 1907, to Dec. 31, 1908. Cloth. Pp. 334. 1909.

REPORTS OF THE TRUSTEES AND SUPERINTENDENT OF THE BUTLER HOSPITAL. Presented to the Corporation at its Sixty-sixth Annual Meeting, Jan. 26, 1910, Providence, R. I. Paper. Pp. 50, with illustrations.

PROCEEDINGS OF THE THIRD ANNUAL MEETING OF THE ASSOCIATION OF LIFE INSURANCE PRESIDENTS. Held in New Willard Hotel, Washington, D. C., Jan. 19 and 20, 1910. Paper. Pp. 127.

A LIST OF CURRENT MEDICAL PERIODICALS AND ALLIED SERIALS, December, 1909. The John Crerar Library. Paper. Pp. 25. Printed by Order of the Board of Directors, 1910.

PROCEEDINGS OF THE IMPERIAL MALARIA CONFERENCE HELD AT SIMLA IN OCTOBER, 1909. Paper. Pp. 107. *Simla: Government* Central Branch Press, 1910.

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Original Articles

THE TUBERCULOSIS MOVEMENT

RECENT OBSERVATIONS WITH REFERENCE TO CERTAIN CLINICAL ASPECTS *

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DENVER

Tuberculosis, of all communicable diseases, has in the past decade enlisted the best efforts of medical workers in all civilized countries. There have resulted laborious scientific research, detailed clinical study, effective organization for its control, valuable investigation of a sociologic and economic nature, and an almost inexhaustible supply of literature. In view of the innumerable factors inherent in a problem of such magnitude, it is impossible here to attempt a consideration of other than a single phase to which my attention of late has been directed.

Unusual opportunities for comparative observation sometimes affording approximate accuracy of conclusions are given to physicians residing in favorable climates. From an experience of eighteen years in Colorado, I venture to allude to certain recent tendencies of the profession with reference to a disease in which unfortunate results are often quite conspicuous.

It is evident that a most frequent disease concerning which serious errors of diagnosis and treatment seem almost impossible, continues, nevertheless, to present grievous difficulties in its early recognition and rational management. That this should be true in view of the active educational propaganda appears remarkable. A scrutiny of conditions, however, discloses the fact that to some extent, paradoxic as it may seem, the campaign against tuberculosis has been indirectly responsible.

CONSERVATISM VERSUS MEDICAL FADS

Following the greater impetus to the tuberculosis movement and the added incentives for clinical proficiency, there has apparently developed a growing inclination toward refinements of diagnosis and conventionalities of treatment. In the midst of the present enthusiasm regarding the new methods of diagnosis and the advantages of the sanatorium is there not manifested a disposition to exalt the practical utility of several diagnostic and therapeutic agencies to a point far above their true value? A just and well-proportioned estimate of the relative importance attaching to some clinical features may not always be entertained if judicious conservatism is opposed by prevailing medical fads. In the same way efforts to develop a comprehensive and effective system of prevention must fail of the fullest success unless cognizance is taken not only of fundamentally important factors, but also of all possible negative phases. To determine their legitimate scope it is as essential to avoid an exaggeration of their advantages as to admit their value within proper limitations. Thus, while institutions for the care of tuberculous invalids are demanded to satisfy individual and social requirements in the cause of prophylaxis, their overwhelming *value in therapeutic management and their unvarying applicability to all classes and conditions have not so far* been subject to demonstrable proof. Although a vitally important factor in the general problem of tuberculosis, the practical usefulness of the sanatorium consists largely in its coordinated relation to other valuable measures of prevention and management.

It is well to inquire to what extent, if any, as a result of the increasing interest in tuberculosis, pulmonary invalids are profiting by earlier diagnosis and more prompt recourse to favorable climates. My recent experience has been materially different in some respects from that of previous years.

EARLY DIAGNOSIS

In the past a serious reflection has been the delay in recognizing the disease, occasioned in many instances by an incomplete review of the history, a superficial inquiry regarding the subjective symptoms, an inadequate and hasty examination, and failure to examine the sputum. Errors of diagnosis were not then referable to the absence of *x*-ray equipment, lack of familiarity with laboratory technic, the impracticability of utilizing guinea-pigs for animal experimentation, or of employing tuberculin in subcutaneous injection. In the majority of instances the simpler means of diagnosis were sufficient to have warranted a much earlier recognition of the disease. Many patients were sent to health resorts only when the disease had become most active and extensive, months after a diagnosis of malaria, bronchitis, typhoid fever, influenza or catarrhal laryngitis had been made. I have previously reported that in a series of 2,300 patients the average period of delay following the recognition of the disease before arrival in Colorado was eighteen months.

SOME CLINICAL FINDINGS

Among the last 313 invalids coming under observation since the compilation of other statistics, the physical examination of the chest was entirely negative as regards tuberculosis in 90 instances, or more than one-quarter of the total number. Bacilli were not found in the sputum in 87 cases. They were occasionally recognized, however, in the absence of physical signs of tuberculous involvement, and *vice versa*. Of the doubtful cases without either physical or bacteriologic evidence of tuberculosis a tuberculin test was negative in 41; 87 presented a vague, ill-defined history of indisposition with suspicious subjective manifestations during from two weeks to four months. Notwithstanding the short duration of these cases, it is of interest to note that the average period of delay for the entire 313 patients is sixteen and one-quarter months, which is nearly as large as that previously reported. This is explained by the fact that, despite the unusually large number of doubtful cases, 125 patients, or about two-fifths of the entire group, were found on arrival to be in advanced stages. That the condition was truly desperate in so large a number is shown by the death of 62, although the period of observation has been comparatively short. Sixteen individuals were sent home as utterly hopeless cases. It thus appears that out of 313 new arrivals 90 are classed as doubtful and 125 as very advanced, leaving a relatively small number exhibiting definite infection of incipient or moderate degree.

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* Read before the Chicago Medical Society, Nov. 3, 1909.

On the basis of the physical examination, bacteriologic findings and tuberculin test, 41 patients are adjudged non-tuberculous. Among a somewhat larger number the previous diagnosis was justly subject to suspicion, there being no substantial confirmation of an active tuberculous infection, although in some instances a positive cutaneous reaction had been obtained. The condition was apparently chronic bronchitis with or without emphysema in 14 instances, non-tuberculous bronchiectasis in 4, pulmonary abscess in 2, pleural effusion in 4, empyema in 1, pericarditis in 1, probably pulmonary syphilis in 2, tuberculosis of the peritoneum in 4, tuberculosis of the intestine without pulmonary infection in 3. Of the remaining cases without physical or bacteriologic evidences of tuberculous pulmonary involvement, the symptoms were largely those of anemia, neurasthenia and recent bronchitis without material loss of weight or elevation of temperature.

Among the clearly tuberculous cases, nephritic complications with albuminuria were present in 25 instances and incurable infection of the larynx in 15. Intestinal tuberculosis was demonstrable in 7; 29 had been treated for somewhat prolonged periods for supposed typhoid fever or malaria, while 19 exhibited a distinct pneumonic onset, and in 12 of these the disease pursued the characteristic course of acute pneumonic phthisis. A considerable number reported that the condition had been regarded as catarrhal or tuberculous laryngitis, local applications having been applied during a period of many months, although no visual appearance of laryngeal involvement was subsequently exhibited. Several cases of many years' standing conformed strictly to the fibroid type. Patients with marked shortness of breath from extensive emphysema and beginning cardiac dilatation were occasionally observed.

CORRECT INTERPRETATION OF PHYSICAL SIGNS

It was, perhaps, to have been expected from previous observations that many cases would represent either advanced stages of the disease or important complications. That so large a proportion exhibited doubtful or negative evidences of tuberculosis has been a source of considerable surprise. Had my experience in this respect been radically different from that of local confrères, I might be forced to acknowledge a personal deficiency in physical diagnosis as the primary factor. Inasmuch, however, as other clinicians in Colorado have noted the same discrepancies, it is fair to assume that at least a partial explanation may be found in attempted over-niceties of diagnosis.

While the tendency toward greater skill in physical examinations is assuredly to be commended, a note of warning may be sounded lest, in our enthusiasm for that which is new, due importance be not attached to the old-fashioned methods without which positively accurate results are often unattainable. Correctness of interpretation is often quite as essential in the problem of diagnosis as a keen recognition of somewhat obscure physical signs. Logical deductions must be based on a comprehensive and selective review of all clinical and laboratory data, rather than on a single objective manifestation of uncertain significance. In the formation of positive conclusions a wise discrimination is necessary regarding the relative importance and frequency of the various physical signs of incipient tuberculosis. An appreciation of their comparative value is not always afforded when efforts are directed largely to the perfection of ultra-refined aspects of diagnosis. Some thought to be characteristic of the disease are inconstant and others devoid of definite meaning.

For practical purposes a working familiarity with the more common signs, and their grouping in connection with suggestive facts pertaining to the history and symptoms, are more necessary for the general practitioner than attention to features of exceptional occurrence, difficult recognition and doubtful import. That physicians in some instances are prone to find too much on physical examination is evidenced by the multiplicity of detail sometimes reported with reference to the finer shades of respiratory sounds in different regions of the chest.

It is impossible here to discuss at length the merits of the slight modifications of normal vesicular respiration occasionally recognized at a very early age, or to review the diagnostic value of deviations from normal apical percussion outlines of clinical interest in cases with moderate involvement.

In the presence of tiny foci of infection it may be difficult to appreciate visual changes in the contour or movement at the apex. Palpation at such a time may also fail to disclose a retardation or deficiency of the inspiratory expansion. Even a well-defined variation from the normal percussion boundaries may not be indicative of tubercle deposit. In cases with moderate infection it is not invariably pronounced, and at an incipient stage is usually absent altogether. The accurate determination of resonant borders in early phthisis is an accomplishment not easily acquired save by constant practice. Krönig has called attention to a typical condition of the lungs found in some patients with nasal obstruction. He reports a fibrous induration with collapse and shrinkage of the apex as the result of the inhalation of dust by such individuals. In spite of the percussion signs suggesting tuberculosis, this may be excluded on the basis jointly of the clinical course, the negative bacteriologic findings, and the failure of the tuberculin reactions. Philip, of Edinburgh, deprecates the want of refinement in percussion methods, and calls attention to a certain adaptation of this means of diagnosis called "tidal percussion." This consists of percussing alternately during expiration and full inspiration in order to determine the limitation of tidal movement and ascertain the degree of functional activity. While recent clinical observations have tended to corroborate the advantages said to be acquired by the application of this method in some instances, the fact remains that its significance is subject to considerable variation.

AUSCULTATORY SIGNS

Inspection, palpation and percussion are often available for the recognition of long-standing tuberculous processes, and are occasionally of contributory value in cases of recent infection. In general practice, however, the diagnosis of incipient phthisis will be made in most cases through recourse to auscultation. As a rule, in cases of recent infection the evidence to be derived by this method relates to the detection of fine, adventitious elements more than to definite changes in the pitch, quality, rhythm or intensity of the respiratory sounds. It has been my observation that the auscultatory signs of chief importance in early tuberculosis consist of faint, scarcely recognizable clicks, at the end of inspiration following a cough, sometimes without pronounced modification of respiratory sounds. They are often obscure if the cough be too violent or the inspiratory effort unduly vigorous. While especial significance attaches to the presence of unilateral râles at the apex, a not uncommon and sharply localized site of their occurrence may be under the clavicle, in the axilla, and in the upper interscapular space frequently opposite the spine of the scapula. I have occasionally recognized very tiny, semidry clicks in the interscapular region without other physical evidence of the slightest tuberculous involvement either in this region or at the apex.

In emphasizing the vast importance of râles as a factor of diagnosis, due cognizance is taken of the conflicting opinions entertained by other observers. Some regard a roughened breathing, variously termed "cogwheel," "harsh," "rude," "interrupted" and "granular" respiration, as of paramount value in the early determination of tuberculous lesions. Turban regards the so-called rough breathing as one of the most important changes of the normal breath sounds. He distinguishes this from ordinary vesicular respiration "in that it appears to be composed of a series of sounds in rapid succession." Grancher alludes to this anomalous form of respiration and calls attention to the absence of softness or smoothness. He describes a harsh respiration, which may be dry, hard or rasping, with or without adventitious sounds, and occurring both in inspiration and expiration, especially the former. Turban, Grancher and Dettweiler have ascribed the origin of rough breathing to a partial obstruction of the finer air passages. It is, of course, readily conceivable that an initial tubercle deposit may encroach on the finer bronchioles to such an extent as to render the air channel narrow and uneven. A slight obstruction of the air current produced by the localized congestion of the mucous membrane in tiny bronchial ramifications may modify the character of respiratory sounds sufficiently to suggest their designation as "rough," "harsh," "interrupted" or "sticky." Sahli believes that this form of breathing is attributable to the presence of secretion in the bronchioles. He states: "When these added sounds can be distinctly differentiated as such from the breath sounds, we speak of râles; if not, they merely give an impure, rough character to the vesicular breathing."

It is apparent that the same sound may be variously interpreted according to the understanding and experience of examiners. It may remain largely a matter of personal equation whether or not the breath sounds in certain instances may be designated as merely impure and roughened or of the vesicular type supplemented by adventitious sounds. In making case records it has been my custom for many years to define apical sounds more or less analogous to what some would term rough breathing as "very fine, semidry râles." Their distinct recognition, of course, justifies their inclusion in the category of râles, although they are quite different in character from the crackling or bubbling adventitious sounds so common in tuberculosis. Roughness of the breath sounds as contrasted with the ordinary smoothness or softness of the respiration is undoubtedly of some provisional diagnostic value in obscure cases. The significance, however, of these modifications of normal breath sounds, including feebleness of respiration, appears decidedly inferior to that of localized râles which are so frequently overlooked. As the descriptive appellation "harsh" is used synonymously with sharpened, puerile breathing relating strictly to an increase of intensity, it is apparent that to avoid confusion this term should not designate the impure vesicular respiration of early phthisis.

INTERPRETATION OF HEMORRHAGE

The diagnostic significance of pulmonary hemorrhage is sometimes subject to erroneous interpretations. A hemorrhagic onset of tuberculosis is not uncommon even without previous subjective symptoms or physical signs. A strong suspicion of incipient tuberculosis is, therefore, awakened by the occurrence of hemorrhage in individuals of apparently robust health. If, however, there are associated loss of weight, elevation of temperature and cough, although without physical signs, a provisional diagnosis of tuberculosis may be warranted. In the absence of definite physical evidences it is important to eliminate all other conditions possibly responsible for hemoptysis. A moderate number of hemorrhagic patients have been observed who presented every apparent subjective indication of pulmonary tuberculosis, yet the bleeding was found dependent on other causes. I have elsewhere reported instances of cardiac disturbance, including mitral disease, a dilated and hypertrophied right ventricle, cases of purpura hemorrhagica and vicarious menstruation, illustrating the danger of mistakes in diagnosis through incorrect interpretations of recurring pulmonary hemorrhage.

Pulmonary syphilis and chronic influenza are not such infrequent causes of erroneous diagnosis as might perhaps be expected. The clinical manifestations and even the physical signs may resemble so closely those of pulmonary tuberculosis as to preclude their differentiation save on the basis of the bacteriologic findings or specific tests.

MANAGEMENT OF PATIENTS

To resume the summary of the cases recently observed it may be stated that several invalids presented the history of a six months' or one year's sojourn in local sanatoria, and some reported an attempted enforcement of the so-called "sanatorium régime" outside of institutions. Many had been informed by their medical attendants that the disease could assuredly be arrested at home, that climate was of no avail, and that tuberculin therapy was of undoubted efficacy as a routine measure of treatment. A large number had been subjected to this, and a few to medication with the various vaccines. The extent to which the mercury treatment had been employed is also worthy of note. Superalimentation had occasionally been enforced, regardless of digestion, circulation or elimination. Fresh air had often been sought even at the expense of fatigue, the necessity of rest in addition to outdoor living not always being recognized as essential. Varying degrees of exercise had been permitted or demanded, irrespective of the temperature or pulse. In many cases attention to the smaller details of therapeutic management had been strangely lacking, although much greater insistence had been made than in former years on the observance of precautionary measures.

Almost without exception patients had been instructed with reference to the necessity of rigid compliance with hygienic rules. In general, emphatic attention had been called to the responsibility devolving on the consumptive to safeguard the interests of others. Not infrequently, accompanying members of the family were found in a state of anxious trepidation from the fancied dangers of exposure, notwithstanding a proper disposal of the sputum and the maintenance of the utmost cleanliness. Laudable as have been the personal efforts in the cause of prevention, it has occasionally appeared that a higher regard was exhibited for the preservation of others than for the protection and restoration of those already afflicted. In one instance, a young woman of neurotic type with moderately advanced phthisis was advised in detail as to her obligation to society, but received almost no information concerning the conservation of strength and the proper individual application of the principles of daily living. In other cases of incipient type the hygienic and dietetic management had been elaborated to such an unnecessary degree as to result in the later moral incapacitation of the invalid. Habits of idleness were engendered which at a later time had been extremely difficult to overcome. An aversion to employment of any kind is not uncommonly noted among individuals who have been subjected for prolonged periods to the demoralizing and degenerative effect of protracted indolence.

The important educational influence accruing from residence in institutions for consumptives has sometimes been perverted to such an extent as to render the patient difficult of subsequent management. Preconceived ideas as to the possible gravity of the condition, the avoidance of drugs and the relative value of various therapeutic procedures have often become a source of considerable embarrassment in the treatment of the clinical manifestations and in the resourceful control of the tuberculous individual. An unreasoning prejudice against the administration of any medicine whatever is somewhat in vogue. In consequence it is sometimes hard to overcome the scruples of phthisical patients against the judicious administration of remedies to control untoward symptoms. Invalids trained to the doctrine of medicinal nihilism are not inclined to yield a ready assent to the employment of appropriate medication even for the suppression of pulmonary hemorrhage, the restoration of disordered digestion, and the relief of various disturbed functions.

There has been displayed at times an unfortunate neglect to observe the importance of an appropriate social environment. The quiet régime of invalidism has often been found seriously disturbed by accompanying members of the family, and particularly by the presence of little children. While in some cases a discreet and intelligent companion may aid in promoting the comfort and contentment of the invalid and insure a more faithful compliance with instructions, it is impossible to overestimate in others the injury inflicted through the absence of tact, perversions of judgment and obliquities of disposition. Children, through the necessity for added care and the greater difficulties in securing suitable accommodations, incumber to no small extent the progress of tuberculous invalids. While so delicate a matter must remain a subject for careful individualization, experience has shown that in the majority of cases the most satisfactory results are attained by the segregation of the patient. That so many children have been permitted to accompany their parents in search of health is perhaps worthy of comment.

A considerable number of patients have presented the history of a severe pulmonary hemorrhage immediately preceding their departure from home. Not infrequently this has been followed by recurrences *en route* and during the first few days in Colorado. It is found that a rather large proportion of the hemorrhages observed are but repetitions of an initial hemorrhage experienced shortly before arrival. While approximately but one-fourth of all invalids may be expected to exhibit a recurrence in Colorado, this proportion would be materially diminished were patients cautioned to defer their journey until the tendency to hemorrhage had been suppressed.

SENDING INDIGENT PATIENTS TO HEALTH RESORTS

Attention has been called by various writers to the undesirability of sending indigent consumptives to health resorts. While emphasizing the folly of permitting destitute invalids who are hopelessly advanced to experience inevitable hardships, a difference of opinion may well be entertained as to the expediency of restricting the importation of those not absolutely impecunious. Under certain conditions of supervisory direction a limited financial status is no insuperable obstacle to recovery. Despite embarrassed resources, final success may be achieved as a result of unusual opportunities which cannot always be attained at home. This subject is worthy of more extended consideration than is possible at this time, but attention may be called to the importance of ascertaining accurately in advance as to the expense necessary to provide proper accommodations, and to the likelihood of obtaining light out-of-door employment for those with incipient infection and dependent on their own efforts for support. That such process of reasoning is not always applied is shown by the history of a clergyman with his wife and four children reduced to the point of abject penury. He had been prevailed on to resign from a sustaining parish and seek a new field of labor in Colorado. Although contributions had been sufficient to meet the expense of transportation, no provision was made for subsequent care. The possible suffering, however, was mitigated to a degree by the fact that the general condition was excellent and the physical and bacteriologic evidences entirely negative. No response was obtained to the ocular tuberculin test.

Apropos of the foregoing considerations the brief report of the following case may be of interest:

> A young man immediately on arrival in Colorado presented a letter of introduction from an acquaintance stating that the invalid on account of the advanced stage of the disease had been denied admission to a well-known state sanatorium. A request was made that he should be cared for without expense and assisted in securing a position. The young man was exceptionally well nourished, without fever or other symptoms suggestive of tuberculosis other than the history of a slight chronic cough which had been subject to occasional exacerbations during the fall and winter months. Examination of the chest was negative, as was also the sputum.
> There was no response to the tuberculin test
> that he had been examined by the medical
> state sanatorium, who submitted to him the
> "The report of your examination yesterday
> case to be moderately advanced and suit
> we have vacancies for cases of this clas
> torium is full and we have many accepted
> to state that I should think the climate
> would be very suitable to your case."

Even on the assumption that an accurate diagnosis had been established, the unqualified statement regarding California or Texas was, to say the least, somewhat indefinite, if not equivocal. The folly of such direction is appreciated when one considers the enormous area included within the limits of what was described as an appropriate climate. Bearing in mind the vast divergence in climatic conditions it is conceivable that on the basis of the information imparted the youth might be expected to profit as well in the heat and humidity of Galveston as in the dry and rarefied atmosphere of El Paso, or in the rainy, foggy districts of California, as in the southerly mountainous regions. If the diagnosis had been correct, the advice as given was radically incomplete. Fortunately, no more serious consequences were involved than the despair incident to the alleged advanced infirmity, the disappointment resulting from the loss of a position, and the expense involved by a trip across the continent.

DEDUCTIONS

Speaking broadly, an analysis of the cases observed during the past year discloses a few significant facts. It is shown that in the present zeal to recognize tuberculosis at an early period an increasing number of patients are hurried to sanatoria or health resorts on a mere suspicion of the infection. Patients without well-defined constitutional symptoms or physical signs are thus subjected to great hardships incident to change of residence, loss of business, separation from family, and other deprivations. It is well known that in many sanatoria an absolute diagnosis is often quite impossible, as approximately 50 per cent. of the inmates do not have tubercle bacilli in the sputum, while very many are without loss of flesh, elevation of temperature, or acceleration of pulse.

It is also clear that for other patients disastrous delays in seeking climatic aid are occasioned by the enthusiasm of medical attendants relative to the supposed advantages of treatment in back yards. In view of recent observation it is impossible to avoid the conclusion that faith in the curability of tuberculosis at home is responsible in large measure for the desperate condition of many consumptives who finally make the journey to a distant clime.

Evidence is not wanting to suggest that rational ideas of management are not always entertained concerning a class of people demanding the greatest conservatism and stability of judgment. Not only are misconceptions sometimes exhibited relative to the efficacy of rest, discretion in diet and caution in specific medication, but delusions as well regarding the value of climate in properly selected cases. Were an unreasoning prejudice replaced by a more accurate knowledge of the various climatic attributes which are capable of producing a direct influence on the organism, much of the wretchedness and disappointment resulting from injudicious advice would assuredly be averted.

Waiving any discussion concerning the comparative merits of the sanatorium and a wisely directed climatic change, it may be submitted that patients in comfortable circumstances should receive such advice as will offer the most favorable opportunities for a speedy restoration to health. It has been amply demonstrated that a large proportion of patients in the incipient stages, through proper methods of living and supervision, may secure an eventual arrest of the infection. It has also been shown by autopsy investigations that this occasionally takes place as a result of inherent individual resistance, notwithstanding unhygienic surroundings, excessive exposure and improper food or clothing. While in many early cases the patients are likely to exhibit gratifying improvement without recourse to change of climate, it does not follow that all patients in incipient stages can achieve a complete and enduring arrest, although the balance may be turned temporarily in favor of recovery. On the other hand, despite strict conformity to a suitable régime at home, procrastination in seeking climatic aid is often attended by unfortunate results.

The choice of climate should resolve itself in all cases into a question of individual fitness. The peculiarities of temperament, the widely differing pathologic processes, the degree of functional disturbance, and other important considerations, emphasize the importance of the utmost discrimination in the matter of climatic selection. This should be adjudged for each pulmonary invalid strictly on the merits of the case, with full cognizance of the import attaching to all modifying circumstances.

It is essential that consumptives, regardless of their status, should be duly impressed by their local physicians with the necessity of conforming to systematic management. That highly improper instructions have been given in so many cases seems almost incredible.

In May of the present year I received the following letter from an inmate of a sanatorium in another state: "I am a patient of Dr. ———, and he advises my trying Estes Park for the summer. He has referred me to you for information regarding the accommodations." In my reply attention was called to the fact that it would be impossible to give detailed advice without definite knowledge as to his individual needs and requirements. A few weeks subsequently the patient reported in person that he had been instructed to consult me solely with reference to accommodations; that his medical adviser had imparted full information as to his condition, and that a physical examination or medical supervision during the summer months was unnecessary. The patient was much emaciated, markedly dyspneic, with pronounced elevation of temperature and greatly accelerated pulse, and yet contemplated, under the advice of his physician, a sojourn in an altitude of 7,500 feet. It was ascertained that for six years the patient had remained under the care of the same medical attendant and exhibited at no time evidence of material improvement. There had been a loss of twenty-eight pounds in weight, a daily elevation of temperature of 100 F. or over, and constant shortness of breath. Despite the occurrence of several hemorrhages, tuberculin had been given during a continuous period of two years, a maximum dose having been reached of 650 milligrams. It was stated to the patient that the results were eminently satisfactory, but that a temporary change to a higher elevation was desirable.

Some significance attaches to the fact that similar errors of diagnosis and treatment have been perpetrated not solely by general practitioners (as might have been supposed), but also by those whose opportunities and equipment should have precluded such possibility. It has been my observation that in the majority of cases the family physician has not shirked his responsibilities in the treatment of pulmonary invalids. Others through literary contributions have accomplished much good in arousing the interest of the profession and in spreading the cause of education among the masses.

Laboratory opportunities and equipment, an aptitude for sociologic study, administrative qualifications and years of scientific research, no matter how capable and conscientious the individual, do not always render him a skilful clinician. A satisfying direction of the pulmonary invalid in individual instances may require of the physician more than skill in diagnosis or familiarity with modern therapeusis. For the wise preliminary guidance of these patients the necessary qualifications are manifold and most exacting. Comprehensive attention to special indications representing questions of personal equation is sometimes possible only by dint of much interested effort. It is primarily essential to conduct a careful investigation not only of all phases of the disease, together with its possible complications, but also of all factors pertaining to the patient, including temperamental proclivities, financial resources, domestic relations and social tendencies. Only from a critical analysis of the various features relative to the invalid and an infinite regard for detail may the general principles of treatment be applied to the best possible advantage. While an aptitude for work of this character may not always be expected of busy practitioners, it is nevertheless fitting to emphasize its importance that the interests of consumptives may be more fully subserved. Finally, in the diagnosis and management of tuberculosis it is well to follow the scriptural advice, to "prove all things; hold fast to that which is good."

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MODERN ANTISEPTIC SURGERY

AND THE RÔLE OF EXPERIMENT IN ITS DISCOVERY AND DEVELOPMENT [*]

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The subject naturally divides itself into three parts: (1) the conditions before the introduction of the antiseptic method by Lister; (2) the means by which his system was discovered and developed, and (3) the conditions existing after the introduction of the method, i. e., at the present time.

My surgical life covers all three of these periods since I graduated in medicine in 1862, some years before Lister began his work. I have, therefore, fought my way from the horrors of the preantiseptic days up to the delights of the present antiseptic days.[1]

I. THE PREANTISEPTIC PERIOD

In my early surgical experience every accidental wound and every surgical operation (that is, an intentional wound) was followed by inflammation and suppuration, i. e., the discharge of "pus" or "matter." This was not only constantly expected as an unavoidable process of Nature and believed to be needful for healing, but was constantly realized. Hence the pus was called "laudable" pus! How well I remember forty years ago at the beginning of each winter's session when I was the assistant of the late Professor Samuel D. Gross, his turning to the orderly and saying to him, "To-morrow, Hugh, I shall lecture on suppuration. Go over to the hospital in the morning and get a cupful of pus for my lecture." Pus, mark you, was always "on tap," so to speak, though the little hospital contained only a dozen beds!

Perhaps the best way to give the reader an idea of wound conditions at that time will be to describe an ordinary operation and its results. We will suppose that it is an amputation. The surgeon approached the operation with the clean hands of a gentleman. He usually wore an old coat covered with dried blood spots from previous service. His finger-nails very likely were long and no special attention was given to them. The instruments were taken out of a velvet-lined case and were as clean as ordinary table-knives would be. The operation was done without any preliminary cleansing of the skin other than to remove any visible dirt. If the knife happened to fall on the floor it was picked up, rinsed in a basin of ordinary water and used as it was. The marine sponges then always used were washed clean in ordinary water and used over and over again even after being saturated with foul pus. The blood-vessels were tied with ordinary silk; one end was cut short, the other one hung out of the wound. After an amputation of a fleshy thigh I have often seen 25 or 30 such "ligatures," as they are called, gathered into two bundles, one at each end of the wound. The flaps were then sewed together with an ordinary needle and thread and the stump dressed first with an old rag (which, however, would be ordinarily clean) or scraped lint spread with some simple grease. Over that would be placed some other rags, lint, cotton, or other dressing, and finally a bandage. During the Civil War these greasy dressings gave place to simple cold-water dressings.

By the second day the patient would begin to have considerable fever. By the third or fourth the temperature would rise to what we now know (for medical thermometers were not in general use in that early day!) to about 103, 104 or 105 F. Then we would poultice the wound. Every few hours the patient would be disturbed, a new poultice put on to replace the old one, now cold, foul and ill-smelling, and by this time bathed with pus. I have often seen the pus escaping by the tablespoonful and the wounds alive with squirming maggots resembling chestnut worms. By this time also it was hoped that the silk ligatures, with which the arteries had been tied, had literally "rotted" loose and each one of them was gently pulled on to the discomfort of the patient. Care was taken that the ligatures with knots tied on them (in order to distinguish those that secured the large blood-vessels) should not be pulled on severely until probably the tenth or twelfth day. Meantime the patient was tossing about the bed with pain, with thirst, without appetite, without sleep except such as morphin would secure. This at the same time dried up all the secretions, producing constipation and other evils.

By about the tenth to the fourteenth day, suppuration having been fully established and quantities of pus pouring from the wound, the fever would subside and the wound would begin slowly to heal. Of course, the healing could not be complete so long as the silk ligatures were still protruding from the wound. Sometimes they did not become detached for even months or years, but more commonly all of them would rot loose in from ten days to three weeks. When the silk ligatures on the large blood-vessels came away, if the healing process had formed in the blood-vessels a firm clot, which had become adherent, and, so to speak, "corked" it up, all went well. But, as very frequently happened, when the ligature and the rotten end of the artery were pulled off and there was no clot to act as a stopper, "secondary[2] hemorrhage" followed. This often came on after the patient's wound had been dressed and the surgeon had left, and, if so, very likely the first notice that the nurse had that anything was wrong would either be the gasping for breath of the patient or his moans and cries, or sometimes by the blood which had not only saturated the mattress, but had even appeared in a pool on the floor.

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[*] This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. This fact accounts for its popular style and the frequent use of *non-technical* terms. Twelve of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, surgery, internal secretions, protozoan tropical diseases, etc.

[1] In this article I use the *word antiseptic* as the more popular one to include also the aseptic method.

[2] So called to distinguish it from "primary hemorrhage," *i. e.* the bleeding occurring at time of the accident or operation.

How fatal were such hemorrhages may be seen from the fact that in 2,235 cases of hemorrhage in the Civil War 61.7 per cent. of the patients died.[3]

I shall never forget one night about ten days after the battle of Gettysburg, when it was my business as "officer of the day" to attend to all emergency cases. That night I was called to five cases of secondary hemorrhage. To indicate what a difference there is between modern and ancient conditions, in the thirty-four years since October, 1876, when I began the practice of the antiseptic method, I have not seen as many cases of secondary hemorrhage as I treated in that one night.

It was a rare thing for any patient after such an operation to get well under three or four weeks, and it was not uncommon for healing to be delayed for three or four months, so that, in spite of the great mortality, the wards of the hospitals were cumbered with convalescent patients. The rare case in which healing took place by "first intention," i. e., at once, was recounted as a triumph. To-day it is precisely the reverse. The case in which healing does *not* occur primarily and at once is regarded as a disaster.

But a prolonged convalescence was the least of the evils to which a patient was subject. A large majority of the wounds were followed by erysipelas, by lockjaw, or by blood poisoning, and hospital gangrene sometimes became a veritable plague. Gangrene in various forms during the Civil War was rife and often fatal. In 2,503 cases 1,142 patients died, a mortality of 45.6 per cent.[4] In one variety which was frequent, hospital gangrene, a simple flesh wound scarcely larger than the bullet which made it, became larger and larger till a hand would scarcely cover it and it would eat into the tissues until one could put half his fist into the sloughing cavity.

Of 505 cases of lockjaw (tetanus), 451 were fatal, a mortality of 89.3 per cent.[5] Pyemia or blood poisoning was terribly frequent and almost as fatal as it was frequent, for of 2,818 cases in the Civil War 2,747 patients died, or 97.4 per cent![6] When a joint was opened or wounded, the result was frequently either amputation or death, or not uncommonly amputation and death. Of 2,382 wounds of the knee-joint alone for which amputation was performed 1,212 patients died, a mortality of 51 per cent., and of 973 similar wounds for which amputation was not performed 591, or 61 per cent. of the patients died.[7]

Fractures, as most people know, are divided into two kinds: simple fractures in which the skin is unbroken, and compound fractures in which the broken bone protrudes through the skin. Simple fractures nearly always heal with relatively little pain and slight fever; but in the preantiseptic days when the skin was broken and the bone protruded two out of three patients with these compound fractures were sure to die.

Moreover, certain regions of the body were forbidden ground unless the surgeon were absolutely compelled to invade them. No one would open the head if he could possibly avoid it. No one would dare to make an incision through the abdominal wall into the cavity of the abdomen unless a bullet or a dirk had gone before him and opened the way. The reason for our hesitation was that death stalked behind us.

How eloquent is the statement of Sir Samuel Wilks,[8] that "the change came home to me in an almost startling manner from what I witnessed in the post-mortem room. Some time before [i. e., before Lister's discoveries], when reading a paper on pyemia (blood poisoning), I had no difficulty in collecting 100 cases which had occurred within a very short time previously, when suddenly this terrible malady disappeared—it was gone never to return." So, too, lockjaw (tetanus), except in accidental cuts that have been neglected and have not received proper surgical care, has almost completely disappeared. Again, at the present day one practically never sees erysipelas after operations; and in order to find illustrations of hospital gangrene to show to my classes for the last thirty years I have had to rely on pictures from the Surgical History of the Civil War and other similar sources, for I have not seen a single case in private or hospital practice since I first adopted the antiseptic method in 1876.

II. THE DISCOVERY AND DEVELOPMENT OF THE ANTISEPTIC METHOD[9]

Neither time nor space will allow me to describe the many earlier steps. Schwann, in 1837, in studying putrefaction, reached the conclusion that it was not the gases of the air, especially the oxygen, as was then universally believed, that caused putrefaction, but organic particles which floated in the air and which could be destroyed by heat. In 1854 Schröder and Dusch showed that putrefaction did not occur in organic fluids in flasks if the air entering the flasks was simply filtered through cotton wool. Pasteur, in 1864, showed that it was necessary neither to heat the air nor thus to filter it, for if the air merely entered through a tortuous tube in which the dust could settle before it reached the fluid no change took place in the fluid, or if flasks containing a material which would putrefy were left open in a place where the air had been undisturbed sufficiently long to allow the dust to settle, as, for example, in a cellar, no decomposition took place and no growth appeared in such fluids.

Lister naturally was profoundly impressed by these studies of Pasteur and he proceeded to make many experiments to confirm or disprove them. Among them I will only relate the following:[10] Lister filled four glass flasks one-third full of urine and drew out the neck of each flask with a spirit lamp into a tube less than one-twelfth of an inch in diameter. Three of these long open tubes were then bent at various angles downward, while the fourth, equally narrow, was left short and vertical. Each flask was then boiled for five minutes, after which they were left with the ends of the small necks still open. Through these open mouths the air, including its oxygen, would pass out during the heat of the day and pass in during the colder night. The boiling was to kill any organisms in the liquid or on the sides of the glass. The object of the bending of the three necks downward was to allow the air to pass in and out, but to intercept the particles of dust, which, according to the germ theory, caused putrefaction. The germs, being heavier than air, could not rise in the bent necks. The fourth neck, however, being short and vertical, not only allowed the air to pass in and out, but gave a very narrow but real opportunity for dust and germs to fall into the liquid. If any of these were living organisms they could produce putrefaction. In a short time the vessel with the short and vertical neck showed growths of mold and the liquid changed its color, showing chemical changes; but in the three flasks with bent necks the urine *after four years was entirely unaltered.* A year after the commencement of the experiment a little of the urine in one of the flasks with a bent neck was poured into a wine-glass; it had not lost its original acidity and normal odor and a microscope showed not the minutest organism. In two days it was most offensive, and under the microscope already teemed with organisms. The other three flasks were subjected to a further severe and rather amusing test. Two years after the beginning of the experiment Lister had to transport them from Glasgow to Edinburgh on the railway when he was appointed to the chair of surgery in Edinburgh. He took charge of these flasks himself, "nursing them carefully," as he says, "to the amusement of my fellow travelers." In the drive from the station to his house the violent rocking of the carriage churned up the contents of the flasks till the upper part was full of a frothy mixture of this proved putrescible liquid with the atmospheric gases; yet after two years more no decomposition had taken place.

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[3] Med. and Surg. Hist. War of the Rebellion, Part 3, Surg. Vol., p. 765.

[4] Ibid., p. 824.

[5] Ibid., p. 819.

[6] Ibid., p. 858.

[7] Ibid., p. 367.

[8] Royal Com. on Vivisection, 1907-08, Q. 7,750.

[9] See Lord Lister's Collected Papers, Oxford, 1909 (later reference to these Collected Papers will be indicated simply by "Lister, vol. —, p. —)," Brit. Med. Jour., Dec. 13, 1902. The Lister number celebrating the fiftieth anniversary of his receiving his degree, and Lister's Huxley Lecture in the same journal, Oct. 6, 1900, and Cameron's "Lister and the Evolution of Wound Treatment, etc.," Glasgow, 1907.

[10] Lister: ii, 173; Brit. Med. Jour., 1871, ii, 225.

The explanation of this convincing experiment was simply this: The germs in the atmosphere could not rise against gravity in any of these tubes bent downward and so could not gain access to the urine. This easily preserved a decomposable fluid for four years, although the air passed in and out freely every day. But the urine in the flask with the straight but very narrow neck in a few days had undergone decomposition. The only difference between the flasks was that the three bent tubes prevented the entrance of the germs, though not of oxygen or other constituent of the air, while the straight but equally narrow tube allowed the germs to enter through in very small quantities, and yet these few grew and produced putrefaction.

In order still further to confirm this experiment, however, Lister tested these bent tubes by the condensed beam of light which Tyndall had used and found that they were optically empty.[11]

These experiments convinced him that it was not the oxygen or any other gas in the air that caused inflammation and suppuration, but that these were caused by *the minute organisms suspended in the air.* In dressing a wound, then, the problem was how to exclude not the air or its oxygen, which was impossible, but how to exclude the organisms in the air. This could be done by applying a dressing saturated with some material capable of destroying the life of these germs. This was the basis of the antiseptic method.[12] It must be remembered that at that time we were wholly ignorant of what now everybody knows, that there are hundreds of different kinds of germs or bacteria. Even the greatest scientists were then groping in the dark seeking for the light by observation and especially by experiment.

About that time Lister was much struck with an account of the effect of mingling phenol (carbolic acid) with the sewage of the town of Carlisle, England.[13] He proceeded, therefore, to experiment with it in compound fractures. I have already stated how fatal a compound fracture was in those days. Indeed, Mr. Syme, the great Edinburgh surgeon, predecessor and father-in-law of Lister, was inclined to think that, on the whole, "it would be better if in every case of compound fracture of the leg amputation were done without any attempt to save the limb." The marked success which followed his dressing these compound fractures[13, 14] with carbolic acid led him then to experiment with its use in abscesses.[13, 14, 15] This was followed again by such remarkable success that he was led to try it in accidental wounds and finally to intentional and extensive wounds, i. e., surgical operations.[16]

Practically the progressive introduction of the antiseptic system from compound fractures up to deliberate surgical operations was one vast experiment in the human living body—an experiment justified, as all the world well knows, by its splendid and continuing results. Yet when in 1880 or 1881 Lister wished to make additional experiments on animals to perfect his method still further, so stringent was the law in England that he was obliged to go to the Veterinary School at Toulouse, France.[17]

Like many surgeons, Lister had noticed the fact that a needle or a bit of glass would often lie for an indefinite period in the body without producing inflammation or pus, but that a bit of silk or linen thread was sure to produce pus. He believed the reason was that the thread was porous and that its interstices contained these germs which no one had then seen and identified, and that they gave rise to decomposition and produced the pus. So, Lister, from his previous experiments with phenol (carbolic acid), believed that if the thread with which an artery was tied were steeped in phenol and both the ends of the silk were cut short it might be left in the wound without producing any inflammation or suppuration. The wound could then be closed at once—an immense gain, for it would heal at once. "Before applying these principles on the human subject," he says, "I though it right to test them on one of the lower animals."[18] Accordingly, Dec. 12, 1867, he tied the great blood-vessel in the neck of a horse, having steeped the silk for some time in a solution of phenol. Both ends were cut short, the wound was entirely sewed up and treated with phenol dressings. Ten days after the operation the dressings were removed, the wound was healed, and there was no pus! Thirty-nine days after the operation he carefully examined the artery which he had tied. The operation was a complete success, the blood current had been entirely arrested and the thread had been covered in by dense fibrous tissue. Thus encouraged, he says: "I felt justified in carrying a similar practice into human surgery."[19] Jan. 29, 1868,[20] he saw a woman, 51 years old, with an aneurism as large as a large orange in the upper part of the left thigh. (An aneurism, I should explain, is a dilated portion of an artery, the yielding of the wall being due to disease of the wall of the blood-vessel. This dilatation continues to increase in size till finally the wall of the artery is so thin that it bursts and the patient dies from hemorrhage.) On the following day he tied the woman's artery with a piece of silk which had been steeped for two hours in phenol.

The wound was treated like that in the horse's neck, i. e., both ends of the ligature were cut short, the wound again entirely closed and a phenol dressing applied. The patient was immediately relieved of the pain she had previously experienced; she had no fever, the pulse was practically normal the entire time, and "her appetite, which had been absent during the four weeks of agony that preceded the operation, returned two days after it."[21] She made a perfect recovery. November 30, ten months after the operation, she suddenly expired. Fortunately, Lister himself had the opportunity of making the post-mortem. He found that her death was due to the bursting of a similar aneurism inside of the chest. Examining the artery which he had tied, he found that the silk had almost all disappeared, but that there was a little fluid around the remnant of the ligature, which probably would have developed into a small abscess and might have caused great mischief had she lived longer. This, therefore, suggested to him the expediency of substituting for the silk some other substance which would be more readily absorbed.[21]

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[11] See Tyndall's charming lecture on Dust and Disease, in Fragments of Science, 1871, p. 275. Appleton & Co.

[12] Lister: ii, 37; Brit. Med. Jour., 1867, ii, 246.

[13] Lister: ii, 3; Lancet, 1867, i, 326, 357, 387, 507; ii, 95.

[14] Lister, ii, 3, 32, 37; Brit. Med. Jour., 1867, ii, 246.

[15] Lister, ii, 32, 36, 42; Brit. Med. Jour., 1867, ii, 246.

[16] Lister, ii, 188, 199, 256, etc.; Brit. Med. Jour., 1871, ii, 225; Edinburgh Med. Jour., 1871-2, xvii, 144; Edinburgh Med. Jour., 1875-6, xxi, 193, 481.

[17] Lister, ii, 281; Lancet, 1881, ii, 863, 901; Tr. Internat. Med. Cong., London, 1881, ii, 369.

[18] Lister, ii, 63; Lancet, 1867, ii, 668.

[19] Lister, ii, 65; Lancet, 1867, ii, 668.

[20] Lister ii, 88; Lancet, 1869, i, 451.

In Philadelphia years before Dr. Physick had already tried animal ligatures made of buckskin, Dorsey those of kid, Hartshorn had used parchment, and Bellenger and Eve the tendon of the deer, but for various reasons these had all been abandoned. Lister determined to try catgut. Although he had great confidence in the use of catgut steeped in a solution of phenol, yet he says[22] "in order to put the antiseptic animal ligature to the test, I made the following experiment," for only by experiment in an actual living body of animal or man could the question whether it was actually safe or not be surely answered. Dec. 31, 1868, he tied the right carotid artery in the neck of a healthy calf at several places with different kinds of animal ligature, including catgut. All were cut short except one end of the catgut, which was purposely left three-quarters of an inch long to determine what would become of this foreign material. The wound was completely closed and dressed. After ten days the dressings were removed and the wound found quite dry. Thirty days after the operation Lister says, on dissection, he was struck with the entire absence of any infection or inflammatory thickening in the vicinity of the blood-vessel. On exposing the artery itself he was greatly disappointed at first to find the ligature to all appearance still there and as large as ever. On more careful examination, however, he found that this apparent ligature was not the catgut ligature at all, but that this ligature had been transformed into bands of living tissue, making the artery not weaker, as silk often did, but stronger than ever at the point where it was tied. The knots had disappeared and also the three-quarters inch of catgut purposely left. Everything had been absorbed.

Even one not a surgeon can see what an enormous difference in rapidity of healing without inflammation, pain or other serious disturbance of the body this use of catgut with immediate total closure and healing of the wound provided. Before Lister, the old ligatures hanging out in bundles were always inviting infection, suppuration, erysipelas, lockjaw, blood-poisoning, hospital gangrene and death. No patient was absolutely safe till the wound was absolutely healed and this often required weeks or months. With the catgut ligature, both ends being cut short, the wound closed at once, and, the ligature being absorbed, the wound healed in less than a week, not uncommonly in three or four days, with little, if any, immediate suffering and without any ultimate danger of those many serious complications above mentioned. But no one not a surgeon can appreciate to the full the meaning of these brief words. While the patient made a smooth and speedy recovery without complications, the surgeon slept the uninterrupted sleep of the just, secure against wearing anxiety on account of sudden hemorrhage or insidious infection. The heart-breaking tragedies which often made the surgeon wish he were a hod-carrier or even in his grave are now but specters of a horrid past.

As I have said, we had no idea at first of the enormous variety and different characters of the germs. In his early studies on putrefaction, Lister spoke of them in a general way as "germs," because the various species of plants (for they are plants and not animalculæ) had not been distinguished. Now there are scores and even hundreds of known varieties. Many of these simply cause putrefaction or decomposition and are not in themselves capable of giving origin to any particular disease. Other varieties, each one of which causes a special disease and can cause no other disease, have been isolated and identified. Some of these germs cause medical diseases, with which I have nothing to do here. The germs of lockjaw, tuberculosis, anthrax (wool sorters' disease), erysipelas, glanders, etc., are among the most virulent foes with which the surgeon has to contend.

How have these been identified and how do we prevent their entrance into the system of the patient? The process is very simple to describe, but very complicated and difficult practically. Let us take the case of lockjaw for instance. A peculiar kind of germ, looking a good deal like a tack with a straight body and a large head at one end, was discovered by animal experiments by Nicolaier in earth and dust in 1884.[23] In 1889 Kitasato, the Japanese bacteriologist,[24] first obtained it in pure culture, former experimenters having failed because they did not know that it only grows well when oxygen is excluded.

But how do we *know* that this tack-like germ and it alone is the cause of lockjaw?

First, in a patient ill with lockjaw, this particular bacillus or germ must be discovered.

Second, a pure culture of it must be produced; that is to say, the tetanus bacillus must be separated from all other germs and cultivated by itself. Third, some of this pure culture of tetanus unmixed with any other germs whatever must be injected into an animal to see point-blank whether this particular bacillus will produce lockjaw. Fourth, from the body of this animal the same germ that was injected must be recovered. Fifth, with a pure culture of this recovered bacillus the cycle must be begun over again and completed sufficiently frequently to assure the experimenter that the connection between the disease and the germ is not accidental, but essential and invariable. Sixth, no other germ used in the same way must produce lockjaw.

In this same manner the germs that produce inflammation and suppuration, which are *the* ever-present danger to the surgeon, have been identified, and also, what is equally important, the places where they and many others exist. In this way we have determined the fact that, while there are some in the air, they are few in number and so constitute a small though a real danger. But the places where they are found and are most dangerous are on the skin and clothing of the patient, the hands of the surgeon and especially under his finger nails and at the roots of his nails, on instruments, dressings, silk, catgut, and other things used for ligatures; in fact, practically every material that one can think of.

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[21] Lister, ii, 89; Lancet, 1869, i, 451.
[22] Lister, ii, 93; Lancet, 1869, i, 451.
[23] Deutsch. med. Wchnschr., 1884, No. 52, p. 842.
[24] Deutsch. med. Wchnschr., 1889, No. 31.

We know now how all-pervading they are. We know, too, that phenol (carbolic acid), corrosive sublimate and other chemicals, or that boiling for a certain time, or heating to a certain degree and for a certain time, will kill these germs. Thousands of such painstaking researches in test-tubes and by many other bacteriologic methods have been carried out all over the world by men either wholly unpaid, working for the love of truth and love of their fellow creatures, or paid but meager pittances. Then when a discovery seems to have been made comes the needful, the finally convincing, the unavoidable experiment—in a living body itself. The only question is should Lister have made this final test first on a horse and a calf, or on two human beings? Can any one with a sane, well-balanced mind hesitate as to the answer?

III. THE RESULTS

The results of the establishment of the antiseptic method have been so extraordinary as to be incredible were it not for ample testimony the world over. They have been already stated in part, but a few words more must be added.

At present before an operation is begun the patient's skin, the surgeons' and the nurses' hands are scrupulously disinfected, sterile gloves are usually worn and every person is clothed in a disinfected gown. The instruments, dressings, ligatures, everything that is to come in contact with the wound, is carefully disinfected. Disinfected gauze "sponges" are used once and then discarded.

It is almost impossible for any one not a surgeon to understand how different are the results from this radical change of methods. No change of climate from fierce mid-winter storms to lovely summer breezes or autumn golden harvest could be greater. Most wounds now heal within a few days, one might almost say without the patient's being sick. Compound fractures and opened joints heal as if there had been no break in the skin. Arteries can be tied anywhere without fear of secondary hemorrhage. The abdomen is now fearlessly opened.

A woman with an ovarian tumor no longer has an operation postponed until it is very dangerous but inevitable, but by early operation is relieved almost without danger, even from tumors so large as to weigh twice as much as the patient herself. When I was assistant to Dr. Washington Atlee in the late sixties, before the antiseptic period, two out of three of his ovariotomy patients died, yet he was the then most famous operator in America. Now any surgeon who loses more than five out of 100 is looked at askance by his colleagues, and many, many hundreds of cases have been operated on with a mortality falling even below 1 per cent. There is not an organ in the abdomen that has not been attacked; organs which formerly when diseased could not be touched because death was almost sure to follow are now operated on every day. In fact as I once described it, the abdominal cavity is almost the surgeon's play-ground! The stomach, the intestines, the liver, the gall bladder, the pancreas, the spleen, the kidney, every organ is operated on, and with extraordinary success. Did space permit, a more detailed statement could be given, but it could scarcely be more convincing.

In obstetrics the same happy results have followed the introduction of the antiseptic method. Puerperal or child-bed fever, which not uncommonly used to kill one-half or two-thirds or even three-fourths of the women in the maternity wards of a hospital, now is practically unknown except in the neglected cases brought into the hospital at a late date, and the preantiseptic general mortality in maternity cases has been reduced from 10 per cent. or more to 1 per cent. and less. Brain tumors, abscesses and other diseases of the brain formerly inevitably caused death, for we never dared to touch them. Now the number of recoveries is very large. Compound fractures now have a mortality of 2 or 1 per cent. or less, instead of over 60 per cent. and now very rarely require amputation; and amputations formerly followed by death in one-half the cases have a mortality of 10 per cent. or less. In general, both the soldier and the sailor are provided with the first aid packet, which contains an antiseptic dressing. This has enormously diminished the mortality of wounds received in battle.

Perhaps no better evidence of the value of the antiseptic method in civil life can be adduced than the results in three hospitals. In Munich[25] the General Hospital was excessively unhealthy. Blood poisoning was very frequent and hospital gangrene, which had appeared in 1872, had become annually a more and more frightful scourge until 1874, when *80 per cent.* of all wounds that occurred in the hospital, whether accidental or inflicted by the surgeon, were attacked by it! At the beginning of 1875 Nussbaum introduced the antiseptic treatment. From then on till Lister's visit, presumably in the summer of 1875, *not one single case* of hospital gangrene had occurred and only one case of blood poisoning, and that a doubtful one. Erysipelas was rare and mild instead of being very prevalent and severe, and the convalescent wards, which formerly had been filled to overflowing, stood practically empty. In Halle,[26] Volkmann was operating in an extremely unhealthy hospital in small, overcrowded wards, with the toilet rooms opening directly into them and a large drain running directly underneath. It was so bad that it had been condemned to demolition. After his introduction of the antiseptic method in 1872, no single patient suffering from compound fracture in which conservative treatment was attained had died either from the fracture or from a necessary amputation, nor was there a single death from secondary hemorrhage or gangrene. No case of blood poisoning had occurred for a year and a half, though 60 amputations had been done. Hospital gangrene had entirely disappeared and erysipelas was extremely rare and mild.

Perhaps, however, the most extraordinary success was obtained by Lister[27] in his own wards in Glasgow. Lister was professor of surgery in Glasgow from March, 1865, till the autumn of 1869, but in that brief period he introduced measures that were absolutely revolutionary. The Royal Hospital in Glasgow was overcrowded, and in some parts of the building the conditions were so frightful that the wards had to be entirely shut up for a time. Lister's own account of this is interesting. He says:

> "A crisis of this kind occurred rather more than two years ago in the other male accident ward on the ground floor, separated from mine merely by a passage twelve feet broad, where the mortality became so excessive as to lead, not only to closing the ward, but to an investigation into the cause of the evil, which was presumed to be some foul drain. An excavation made with this view disclosed a state of things which seemed to explain sufficiently the unhealthiness that had so long remained a mystery. A few inches below the surface of the ground, on a level with the floors of the two lowest male accident wards, with only the basement area, four feet wide, intervening, was found the uppermost tier of a multitude of coffins,

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[25] Lister, ii, 248; Brit. Med. Jour., 1875, ii, 769.
[26] Lister, ii, 250; Brit. Med. Jour., 1875, ii, 769.
[27] Lister, ii, 124; Lancet, 1870, i, 4, 40.

> which had been placed there at the time of the cholera epidemic of 1849, the corpses having undergone so little change in the interval that the clothes they had on at the time of their hurried burial were plainly distinguishable. The wonder now was, not that these wards on the ground floor had been unhealthy, but that they had not been absolutely pestilential. Yet at the very time when this shocking disclosure was being made, I was able to state, in an address which I delivered to the meeting of the British Medical Association in Dublin[28], that during the previous nine months, in which the antiseptic system had been fairly in operation in my wards, not a single case of pyemia [blood poisoning], erysipelas, or hospital gangrene had occurred in them; and this, be it remembered, not only in the presence of conditions likely to be pernicious, but at a time when the unhealthiness of other parts of the same building was attracting the serious and anxious attention of the managers. Supposing it justifiable to institute an experiment on such a subject, it would be hardly possible to devise one more conclusive.
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> Having discovered this monstrous evil, the managers at once did all in their power to correct it. . . . But besides having along one of its sides the place of sepulture above alluded to, one end of the building is coterminous with the old cathedral churchyard, . . . in which the system of "pit burial" of paupers has hitherto prevailed. I saw one of the pits some time since. . . . The pit, which was standing open for the reception of the next corpse, emitted a horrid stench on the removal of some loose boards from its mouth. Its walls were formed on three sides of coffins piled one upon another in four tiers, with the lateral interstices between them filled with human bones, the coffins reaching up to within a few inches of the surface of the ground. This was in a place immediately adjoining the patients' airing ground, and a few yards only from the windows of the surgical wards! And the pit which I inspected seems to have been only one of many similar receptacles, for the *Lancet* of September 25 contains a statement, copied from one of the Glasgow newspapers, that "the Dean of Guild is said to have computed that five thousand bodies were lying in pits, holding eighty each, in a state of decomposition, around the infirmary."

When to all this is added the fact that the large fever hospital was separated from the surgical hospital by only eight feet, that Lister's hospital of nearly 600 beds was cramped in area and almost always full to overflowing, and that he was operating, it might almost be said, in a charnal house, yet that those wards were continuously and conspicuously healthy and enjoyed for "three years immunity from the ordinary evils of surgical hospitals under circumstances which but for the antiseptic system were specially calculated to produce them,"[29] we stand convinced by such a huge unintentional experiment on man himself.

Were not results such as these sufficient to justify the experiments on animals as related by Lister himself and here quoted, by which such blessed relief has been brought to mankind?

What was seen in Glasgow has occurred all over the world. The surgical revolution of the last thirty years is the most momentous in the entire history of surgery. In every science—chemistry, engineering, botany, physics, electricity—the era of precise experiments has been the era when enormous and constant progress has been made. Medicine is no exception. We have closely studied disease by various observational methods, and clinical observation for two thousand years had slowly advanced our knowledge up to a certain point. Then experimental research, which employed methods of precision, varying conditions at will, noting the different results, and multiplying the experiments at will instead of waiting, it might even be years, until Nature's second experiment occurred, began its work; and in the past thirty years experimental research has produced a more fruitful harvest of good to animals and to mankind than the clinical observation during thirty preceding centuries.

But we are far from having attained perfection. In medicine and in surgery many problems of disease and death are still awaiting solution and can only be solved by the experimental method. A number of organs in the body are as yet inaccessible and others have functions of which we know little or nothing. Many operations ought to be bettered in method and in results. The causes of many diseases, such as cancer, scarlet fever, measles, whooping-cough, etc., are as yet unknown. To dispel all this ignorance and discover a cure for all these and other diseases is the earnest wish of wise and humane experimenters the world over. Shall the community aid these humane life-saving efforts, or shall they by restrictive legislation call a halt and let death slay our fellow creatures and especially our dear children? The answer is clear. It will never be other than an emphatic NO to the latter cruel course.

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THE OBLIGATIONS OF THE UNIVERSITY TO MEDICAL EDUCATION *

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In an admirable paper before the Sixty-fifth Convocation of the University of Chicago, in December, 1907, Dr. William Henry Welch,[1] professor of pathology in Johns Hopkins University, pointed out with clearness that the historical and right home of the medical school is the university, and that it should be an integral part of it, coordinate with other departments. In the discussion of this matter he called attention to the fact that no other type of medical school has existed on the continent of Europe other than that which was under the fostering care and which shared the ideals of the university. It was under similar ideals that the medical school in this country began, and Dr. Welch traced with admirable clearness the story of the transfer of medical education from the university to the proprietary medical school.

He called attention to the fact that the proprietary school in higher education is a unique institution in the history of education, one for which the United States of America is alone responsible. Dr. Welch traced then in the most interesting way the gradual recovery of medical education in this country during the last fifty years and showed that our medical education is to-day on the up-grade and that we are striving to remove it from the proprietary status and to bring it back once more into a close association with the university, where it may receive both the inspiration and the assistance which it must receive if it is to exist on a true basis.

Since the delivery of Dr. Welch's address two years ago, the Carnegie Foundation for the Advancement of Teaching, in conjunction with various medical bodies which are interested in this matter, has made a careful study of the present status of medical education in the United States and Canada. In the course of that examination every medical school in these two countries has been visited and studied. This includes the schools of every sect of medical practitioners. The material which this study has afforded is now being put into form for publication, and it is hoped that within two or three months it may be given to the public. To-day I shall endeavor to give some general results of that study and to give them in the light of the summary which I have just made from Dr. Welch, that is to say, in full recognition of the fact that the home of the medical school is in the university and that the gains which are to be had by the incorporation of the medical school as a part of the university are mutual, the university on the one hand offering a strong faculty and the medical school on the other hand conferring prestige and honor and scientific enthusiasm on the university. Such union must always be reciprocal if it is to be a true union; and there is no reason for the existence of the medical school in the university unless the university itself both confers and receives intellectual and educational help.

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[28] Lister, ii, 45.
[29] Lister, ii, 126; Lancet, 1870, i, 4, 40.

* Read at the Joint Conference of the Council on Medical Education and Committee on Medical Legislation of the American Medical Association, Chicago, Feb. 28-March 2, 1910.

[1] THE JOURNAL, Jan. 4, 1908, p. 1.

A brief statement of the situation which one actually finds in the United States and Canada to-day shows that there are in existence about one hundred and fifty medical schools. We have, in a word, more schools for the training of physicians and surgeons in the United States than are to be found on the whole continent of Europe. Of these, eighty-two are connected with actual colleges or universities. In making this count I leave out of consideration as university medical schools those under the control of such institutions as the University of Buffalo, the University of Maryland, and the like, in which the university is really fictitious. During the last ten years these one hundred and fifty medical schools have graduated on the average about five thousand physicians annually. How great an overproduction of physicians this is may be appreciated from a consideration of the following facts: From the experience in the older countries it seems clear that in large towns one physician for every 2,000 persons would, under present hygienic conditions, be sufficient. In more thinly settled regions one physician for every 1,000 inhabitants would suffice. In general, we may say that one physician for every 1,500 persons would be a fair ratio, and this is approximately that of the older countries of Europe. The actual proportion in the United States at this moment is one physician for every 568 persons, which gives us twice as many physicians per thousand of population as England, four times as many as France, five times as many as Germany.

Consider it again from another point of view. The twelve southern states gained, in 1908, 358,837 persons. On the basis of one physician for every 1,500 inhabitants the section needed, in 1908, 238 more physicians. During the course of the same year there were 465 vacancies due to death. In view of the current overcrowding, these vacancies did not really need to be filled; but if we fill two vacancies with one new physician, 233 more graduates would have been needed; in all, 471 new men. As a matter of fact, 1,144 physicians were graduated in southern schools and 78 more southerners in Baltimore and Philadelphia. The total would certainly come to 1,300 additional physicians, three times what was needed on a most liberal estimate. In the rest of the country the total gain in population was 975,000, to meet which 650 physicians would have been required. There were also 1,605 vacancies by death, to meet which would have required 800 more on the hypothesis just made. About 1,500 physicians would then amply have sufficed to fill the vacancies. As a matter of fact, 3,500 were produced. It seems clear that by the operation of the great number of medical schools and the laxity of our laws we have for twenty years past graduated into the profession about three times as many men as are actually needed.

Before considering the duty of the university in the face of these conditions I wish to refer to one or two of the grounds on which this overproduction has been defended and which, from the material which has been gathered recently, are clearly shown to be untenable. In the inquiries which have been made concerning the reasons for the existence of various low-grade medical schools I have been met everywhere by the statement that it was the function of such a school to furnish doctors for rural regions. It was admitted that the training of these doctors was poor, but the constant assertion is made that the inhabitant of a small village or the resident on an isolated farm must accept this poor medical attendance or none at all. The investigations which we have made show conclusively that there is no truth whatsoever in this claim. It is perfectly clear from the statistics which have been brought together that a low basis of education does not force a distribution beyond a certain point. It may not be generally appreciated that the reverse of this is also true, namely, that a high basis of education does not prevent a wide distribution; that is to say, men graduated from good schools will go into all fields. The fact is that in the distribution of physicians many elements will count—the number available for distribution, home ties, individual tastes, professional opportunity, and financial consideration. The experience of foreign nations and our own shows that more expensively trained doctors will go into the country just as the poorly trained do, and it shows, on the other hand, that the ill-trained and poorly equipped men will in large measure congregate and get in each other's way. In proof of this statement it may be said that in Canada, whose laws for the admission to practice are far more advanced than ours, the well-trained graduates of McGill and of Toronto go in large numbers into the territories of the Northwest. In our own country the most expensive physicians whom we have yet graduated are Johns Hopkins men, and no one would propose to-day that the Johns Hopkins standards of admission and of facilities should be universally enforced. Nevertheless, these elaborately trained men have an astonishing disposition to scatter. They are to be found in thirty-two states and territories, and about a dozen have gone as missionaries to the Orient. One finds a Johns Hopkins man at Clayton, Ala., a town of 1,000; at Gorham, Colo., a town of 364; at Wells River, Vt., with 666; at Fairfax, Va., with 200; at Mazomanie, Wis., with 900. Western Reserve University is almost equally high in its entrance requirements, and one finds Western Reserve graduates in small towns of 700, 500 and 400 inhabitants. The argument that a cheap medical school must be maintained for the benefit of rural regions is absolutely without foundation.

A second argument which has been advanced wherever the low-grade medical school takes root is the time-worn argument on behalf of the poor boy. For example, in the city of Philadelphia, where medical facilities are offered on easy terms and under the most moderate conditions of entrance requirement, Temple University considered it necessary, for the sake of the poor boy, to maintain a night school of medicine. This argument, like the other, is based not on consideration for the poor boy, still less on consideration for the public, but on the desire to run a medical school. The truth is that the medical education which the poor boy thus gets costs him just as much as he would pay for something better. A four-year medical education in the Chicago, Baltimore, or Philadelphia schools on the ordinary basis costs in tuition fees and board $1,370. The same student can go to Ann Arbor for six years and save a few dollars; or if he wants a larger city, to the University of Minnesota at Minneapolis, for a little more. Now the absurdity is here: The low-grade medical school will tell you that their graduates can afford to go to small towns because they have not had an expensive education; well, then, so can the graduates of Ann Arbor and Minneapolis, for their education, though of higher grade, has been just as cheap. In a community where a fairly strong medical school is conducted it is possible to start a new school only by lowering standards, and it is this process which brings in the argument of the poor boy. The truth is that the poor boy has no right to enter the profession unless he is ready to make the sacrifices necessary for the right preparation. It is also true that in any large American community the poor boy who will qualify himself rightly will find the way both to a fitting education and to an efficient medical training. The argument for the poor boy is in effect an argument for the poor medical school, and it has no reasonable foundation.

Taking the situation of medical education as it now stands, knowing, as we now know, how great an overproduction of physicians we have been making, the question to which I wish to bring attention is this: What is the duty of a university with respect to medical education under such circumstances? Granting, as one does freely, that the historic, natural home of the medical school is in a university, what is the duty of an institution toward the teaching of medicine in view of the present situation of medical education and of medical practice in America?

To answer this question fairly, one needs to consider with some detail what the concrete services are which a university can render to its medical school. In seeking to answer that question, one will keep in mind the fact that, while medicine has always been a learned profession, it is to-day true that there is a vast difference between the scientifically trained physician and the able practitioner of earlier days. Within twenty-five years the development of certain fundamental sciences has been so great that the practice of medicine has come to be almost the application of these sciences—or at least this much may be said: the practice must start and rest as it did not in the preceding days on these fundamental sciences—pathology, anatomy, physiology, physiologic chemistry, bacteriology, and the like. This means that to-day we seek to train in our medical schools, as always, the practitioner of medicine, but the practitioner of medicine to-day is a scientifically trained man as he never was before. It does not mean that the analysis of the chemical laboratory or of the biologic laboratory will ever replace the skill of the clinician. It will always be true, so far as we can see, that in the treatment of diseases clinical skill and experience will be the largest factor in the physician's equipment, but it does mean that clinical skill to-day is supplemented with aids which the generation before did not know, and that the practitioner who is trained in a school which is unable to give these fundamental facilities is practicing the profession of a generation ago.

In view of the fact that the clinician is still the guiding spirit in medical education, it will always remain true that a medical school must be made up of school, hospital, and dispensary, operated as a single working plant.

Taking into account the present status, therefore, of medical education and taking into account also the standards of training which modern practice demands, it seems to me that the concrete services which the university can render to its medical department may be grouped under three heads:

1. The definition and maintenance of entrance standards.
2. The inspiration of the medical school with an appreciation of productive ideals both in education and in science.
3. The financial support of the medical department exactly on the same basis as other departments are supported.

To put the matter in a single sentence, a university which understands the present situation in medicine, which appreciates the ideals of modern medicine and which appreciates as well its own duties and responsibilities, will make itself responsible for the standard of admission to its medical school, for the ideals which govern it, and for the financial support which is to maintain it.

What is a reasonable basis, what is a reasonable standard to exact as the basis of a medical education? It is generally conceded that a scientific training in physics, chemistry, and biology constitutes an almost indispensable preliminary qualification for the study of medicine. As our present educational system stands, it is practically impossible for the student to obtain this equipment short of two years of college study, which would mean his entrance into the medical school at approximately twenty years of age.

When one comes to consider the enforcement of such a standard, however, it is clear that one must take into account the status of educational facilities in the various sections of the country. No standard can be enforced for which the schools and colleges of the region cannot reasonably well fit students. Our present educational facilities in the eastern and middle states and in the western states are already so considerable, they are so rapidly increasing, and they respond so quickly to pressure of the right kind that there is no question that the requisite number of physicians could be obtained from these sections even with the enforcement of such a standard as that indicated. The only practical difficulty that stands in the way is that the enforcement of such a standard would involve the death of most of the medical schools now existing in these regions.

In the South matters are very different. Both the legislative conditions and the educational facilities in that region are such that the standard just proposed, which is clearly a fair one for the profession itself, could not possibly at this moment be suddenly applied. This, however, is no excuse whatsoever for the almost utter absence of standards which is characteristic of that section. Only three complete institutions in the twelve Southern states have anything that can be definitely called a standard of admission for their medical schools. These are Tulane, the University of Texas, and the University of Virginia. Inasmuch as standards in medical education are necessarily tied up with the general educational system, I venture to suggest that the feasible standard in the Southern states at this moment for entrance into the medical schools is the same as that for entrance to the academic department, that is to say, high school preparation. This is the level which the general school situation of the different states either reaches at this moment or will reach in the near future. From this point progress may be gradual, but it will be inevitable. I venture to point out also that the enforcement of even this standard in the South will bring about the extinction of most existing superfluous schools.

One more thing I venture to add concerning the matter of standards of admission to the medical school, a statement clearly applicable, however, to the American university throughout all its courses, and that is that no increase of standards is helpful which does not mean actual enforcement. The conscientious and just enforcement of the four-year high-school standard throughout the whole country would alone go far toward clearing the situation; but in any case a university which undertakes to maintain a medical school ought clearly to face the duty of maintaining in its medical school standards fully abreast of the educational status of its region. If an institution is not willing to do this, then it ought not to meddle with medical education at all. The college or the university which maintains a decent standard of admission for its college and a far lower one for admission to its medical school is frankly disregarding its own duty to medical education and is seeking, as a rule, to support a medical school out of fees in order to have a certain institutional completeness. The day has gone by in the United States when an institution calling itself a university can do this without being recognized as shirking the responsibilities of a true university.

There are in the United States a few institutions of high grade which require college graduation for admission to their medical schools. We may rejoice to have this standard set up in a few of our best schools. I do not believe, however, that it will be generally adopted, and largely for the reason that, however necessary it is to give the medical practitioner the advantage of a liberal education, it is also important for him to get into the profession before he is too old.

With regard to the second specific service of the university to the medical school, namely, as to its influence on the pedagogic methods and the scientific ideals, I venture at this point merely to call attention to the very general neglect of this function of the university in most American institutions. The American medical school, even when it has been incorporated into the university itself, has remained in many cases an *imperium in imperio*. There has been, as a rule, little commerce between the professors of medicine and the professors of other faculties of the university. This has been due in part to the fact that the professor of the medical school has been in the past a practicing physician coming into the school for only brief lecture hours and having little touch with teaching or with the members of other faculties. In the best schools to-day, where not only the professors of physiology, pathology, chemistry, anatomy, and biology are men giving their whole time to the work, but where also the professors of medicine, of surgery, of pediatrics, are coming to be placed on an explicit teaching basis, the opportunity for the development of a true university spirit in the medical school is beginning to appear. This ought to result in the spread of the scientific spirit through the medical school; and while it will always remain true that the chief function of the medical school is to train the medical practitioner, it will also be true that the spread of university ideals will mean that more men will take up the investigation of medical problems from the scientific standpoint and that our medical schools, so organized, will lend themselves in increasing measure to the development of the scientific side of medicine and the investigation of its problems.

I venture here to allude to one feature of our American medical school organization which, from the standpoint of one long associated with an institution of learning has struck my attention forcibly, and that is the project for a divided medical school. It seems clear to me that such a school has distinct disadvantages and that the very division gives up in large measure the opportunity of the university to create in the medical school university ideals. It is difficult to understand, for example, how a medical school in which the clinical school is two hundred miles away from the scientific laboratories can receive any great inspiration from the men who work in these laboratories. Still more difficult must it be for the clinician, whose spirit ought to dominate the whole institution, to keep the laboratory methods and the laboratory men in touch with clinical aspirations and clinical needs. It may be that the divided medical school will succeed, but it seems that it must succeed against much greater obstacles than the school which is organically one. I cannot help wondering, for example, how it would affect the pedagogic and professional ideals of an engineering school if the first two years of it were given in one place and the last two years in a place two hundred miles away. My impression is that there would be two separate schools with very little more reaction, the one on the other, than exists between any other two schools so situated.

With respect to the third service which the university ought to render to its medical department, namely, that of an adequate financial support, I wish to speak with some degree of definiteness. This obligation is one which few colleges or universities in our country have frankly faced. In more than one report of university presidents during the past year I have read the boast that the medical school has not cost the university a cent! Colleges and universities have taken over medical schools in distant places with no expectation whatsoever of furnishing any support, and generally throughout the relations which have existed between colleges and universities on the one side and medical schools on the other there has been a most remarkable absence of any sense of financial obligation on the part of the university. I am convinced that this action has been due in the main to a lack of knowledge on the part of college and university trustees and officers. They have come to look on medical education as self-supporting; they desire a medical school in order that their institution may seem complete. The overproduction of physicians is a matter with which they are not acquainted, and the college and university have gone ahead to take over a medical school with absolutely no thought of its support—a thing which they would never do with a school of applied science. Just why it should be believed that a medical school could be sustained by moderate fees, while an engineering school or a college of arts needs a large and strong endowment, is a matter which I have found it difficult to understand. Furthermore, when an engineering school undertakes to sustain itself in the main from fees, it exacts a fee somewhere comparable with the cost of the education. Thus the Institute of Technology at Boston, which is sustained in the main from its fees, charges a tuition fee of $250 a year and laboratory fees in addition, which amount in some cases to $50 more. Such a fee for a medical department would be thought impossible.

What does it cost to run an adequate, all-round medical school? By an all-round medical school I mean one in which all departments are fairly strong. It will be found that some schools of fairly high reputation have maintained themselves by making a single department strong and leaving all the rest weak.

The investigations of the Carnegie Foundation prove that it costs easily $10,000 a year to conduct any one scientific department of the first two years of medical education in a satisfactory fashion for classes of fair size. This means the teaching of a comparatively small number of students and makes relatively slight provision for any scientific activity on the part of the teachers. A number of institutions that are economically conducted spend $15,000 or more a year on a single subject like pathology or physiology, including a fair provision for investigation, and these are not institutions which one would think of as most liberally endowed. A medical school, therefore, which is not in a position to spend $50,000 or $60,000 a year on the work of its first two years has omitted some part of its legitimate duty. It will be difficult for any complete medical school to do its fair duty by a moderate body of students with an income of less than $100,000 a year. Furthermore, this cost will increase rather than diminish, for the reason that with the improvement in the training of the first two years correspondingly improved clinical teaching will be required. It has been one of the anomalies of this whole development to note that many medical schools have acted on the idea that standards of admission could be raised without further provision for an improvement in the teaching facilities and in the teaching itself. It requires only a year's experience, however, for such a school to appreciate the fact that young men who have had two years of college training will not be satisfied with the kind of teaching nor with the facilities which will be accepted by boys fresh from the high school. The college trained man becomes restless under the physician who drops in to lecture and spends half the time in telling stories from his medical practice, and he is not at all willing to sit under a teacher whose knowledge of his subject is evidently gathered from the text-book before him. The raising of standards of admission means an important increase in expense on account of the quality of the instruction. An institution which undertakes the teaching of medicine on a basis much lower than that which I have indicated is not likely to serve either the cause of education or the cause of medical practice, and an institution which finds itself facing the question of the creation of a medical school or of the adoption of one should fairly face also the question whether it can get the means necessary for its support. It goes without saying that no university is justified in entering into any arrangement for a medical school which rests on a contractual relation. Unless the university can control, inspire, and support the medical school, it has no right to it.

Few institutions in the United States or Canada have lived up to their obligations to their medical departments in all three of the essential respects to which I have referred. Some have not even appreciated any one of them. As I have before remarked, eighty-two of the one hundred and fifty medical schools of the country are connected with actual colleges and universities. Of these, perhaps one-half fulfil all three of these obligations in a reasonable degree, in the sense that the universities fix and enforce definite standards for entrance, secure the same sort of teaching and scientific activity in the medical department as in others, and, finally, make themselves responsible for funds that go far beyond tuition fees received by the medical department. Of these institutions it may be fairly said that they are alive to and meet the responsibilities which they have undertaken in the matter of medical education.

There is in the next place a group of medical schools legally and organically parts of a college or university, but neglected by the institutions of which they are a part in one or more of the three services to which I have referred. It is difficult to say what these departments gain by their university connection. They receive no support, they get no oversight, they do not breathe the university air, nor receive any inspiration from university ideals. For example, the medical departments of Vanderbilt, Northwestern, Tufts, Bowdoin, administer in their own way the entrance requirements which the university sets up, and in none of these cases are the entrance requirements strictly enforced. In the matter of support, the university is often a harsh creditor to its medical department, sometimes not even lending it a dollar and at other times exacting, as in the case of Vanderbilt and Tufts, principal and interest for every advance made out of the general funds. As these institutions, organic university departments though they be, live on their fees or less than their total fee income, it is clear that the ideals of the university do not materially affect them. They are for the most part routine teaching schools, in no true sense university schools. Some of these organic medical departments belong to universities which can hardly hope by anything short of a miracle to do anything for medical education. For example, Drake University, with total productive funds of $290,000, has an organic medical department. The University of Alabama, with a total state appropriation for buildings and maintenance of $71,000 a year, has such a department. So have the University of Mississippi with similar appropriations of $110,000, the University of North Carolina with an annual appropriation of $70,000, the University of Tennessee with an annual maintenance appropriation of $65,000. It is perfectly clear that the problem of medical education is begun rather than solved when a university incorporates into its organization a medical school.

Twenty-seven of the remaining colleges and universities of the United States and Canada have nominal or affiliated medical departments which they not only do not support, but do not control. The state universities of Arkansas, Georgia, Illinois, and Oregon are in this position. Among endowed institutions that lend their names to proprietary medical schools for which they can hope to do nothing and which they do not control so long as they are in this situation are the University of Denver, Washburn College, Cotner University, Ohio Wesleyan University, Epworth University, Baylor University, and Dalhousie University. The budgets of some of these institutions are absurdly small in comparison with the cost of a decent medical school. Among them are some which are capable of leading respectable lives as colleges, but are little less than impossible as universities—for example, Union University, New York, which is the name given to the superficial combination of Union College with weak schools of law and medicine in Albany.

In a word, an inspection of the eighty-two medical colleges in the United States and Canada which are associated with colleges and universities shows that the relation is in many cases a superficial one. The college or the university has not in these instances approached the problem of medical education with serious purpose or with any fair sense of its responsibilities. It has been willing to give its name to a medical school, no matter how far away it was from university ideals and scientific traditions. In truth, the colleges are in no position to throw stones at proprietary medical schools.

of cases. A close analysis of the latter cases would undoubtedly raise the percentage of positive reactions, as too frequently the clinical diagnosis, which is often accepted when the serum reaction is negative, is incorrect.

The results obtained by various investigators during the primary stage vary. This in all probability is due to the different periods with regard to their infection in which they were examined. Some report finding the reaction in two-thirds of the cases in the chancre stage, others as high as 90 per cent., and my own results run as high as 100 per cent.

Bruck, Stern and Lesser report finding the reaction in a few cases before the appearance of the initial lesion. Lesser obtained the reaction for syphilis in a case of gonorrhea one week following exposure, whereas the chancre did not appear for two weeks, which, in turn, was followed in six weeks by secondaries. The results obtained in the primary stage are of great importance when we consider the possibility of prophylaxis against general infection by extirpating or destroying the initial lesion. It would appear from the observations of many that the reaction does not appear as soon as the initial sclerosis, but a few days or a few weeks later. On the other hand, the reaction has been found positive before the lesion has appeared.

TREATMENT

While I am disinclined to believe that the extirpation of the initial lesion, a teaching centuries old, will obviate the occurrence of a systemic infection, it would seem consistent with our present knowledge of the question that, if a local genital or extragenital lesion contained the *Spirochæta pallida* (which is regarded as the cause of syphilis), and the blood serum was negative to the syphilitic reaction and there was no evident adenopathy, the chancre should be removed. I would not expect this to obviate the general infection, because we know from clinical experience and from reports of cases so treated that it does not do so, but if the primary infection is a local one and the constitutional infection is not detectable at the time of blood examination, this would appear a tenable procedure.

In order that the serum reaction for syphilis may prove of value as an index to specific treatment, it is necessary to know whether or not its occurrence coincides with the activity of the virus, whether with the subsidence of the latter, viewed from a disappearance of symptoms, the reaction becomes weaker, and finally negative, and whether a positive reaction during apparent latent syphilis is, in the absence of visible or palpable specific lesions, to be regarded as a forerunner of them, or indicative of visceral luetic changes. The obtaining of a positive reaction in secondary and tertiary cases to the extent of from 90 to 100 per cent. is conclusive evidence of its association with virus activity.

In nearly all patients placed under vigorous antisyphilitic treatment a weakening and final disappearance of the reaction will follow. The reaction rarely disappears before the symptoms, and usually not for some time thereafter. Some tertiary cases that seem resistant to treatment continue to show the reaction and form an exception to the above rule. But this is, in all probability, due to the fact that many of these individuals are more or less immune to specific treatment and the process continues active. The frequency of the reaction in the early periods of latency in syphilis, where it is not treated, is, from a clinical standpoint, comparable to the frequency of recurrences in these cases. Its occurrence in later periods of latency is likewise comparable to the frequency of visceral lesions found in old syphilitic cases that come to post-mortem from other causes and are there recognized for the first time, and to the development of many visceral and parasyphilitic lesions recognized during life.

The following facts, first, that the reaction is found in practically all secondary cases and in 90 to 95 per cent. of tertiary cases; second, that the reaction weakens and finally disappears; as do the symptoms under specific treatment; third, that a negative reaction and absence of symptoms may sooner or later be followed by a reappearance of both, seem to me incontestable evidence that the reaction means, when found, active syphilis, and is therefore a positive indication for treatment.

If an individual who has been apparently free from symptoms and in good health for years gives a positive serum reaction, it signifies that he has somewhere in his organism an active syphilitic process. This may be in a location that does not cause symptoms and is not ascertainable by the physician. It may signify the development of a serious visceral or parasyphilitic affection, for we know that in practically 100 per cent. of cases of general paresis and in a very large proportion of tabes the serum reaction is positive.

As the treatment for syphilis is usually continued for from one to three years, the serum reaction could be of value only during this time in deciding whether or not the treatment is being pushed to the necessary extent, but in no case should it be interrupted unless the patient gives a negative reaction.

As it is a matter of experience that during the periods of latency the serum reaction is found positive in a considerable percentage of cases, which concurs with clinical experience that recurrences are not infrequent during this time, patients should be controlled at comparatively short periods with the serum test as well as by clinical observations. This should be done because, while the manifestations, if they appear externally, might be considered a sufficient guide for resumption of treatment, no one would care to await a recurrence in the form of a specific meningitis when we have a means of ascertaining activity of syphilis and of anticipating such a catastrophe.

On the other hand, when treatment is given a patient each year or oftener, such frequent examinations might not be necessary, but no period of treatment can be considered complete in the light of our present knowledge unless it is controlled by the serum reaction; so that not only is it an index to the beginning of treatment, but also to its interruption. It should be borne in mind that the skin and mucosa manifestations of syphilis are the least important in the life history of a syphilitic patient, and that patients are not safe because such evidences have not appeared for years. Such lesions seldom prove dangerous to life; at the same time we know that, next to tuberculosis, syphilis, directly and indirectly, is the most frequent cause of death in man (Gerhardt). Its fatal action is through the cerebrospinal and cardiovascular systems, glandular organs, etc.

Patients should never be assured that they can be or have been cured of syphilis, for once syphilitic always syphilitic. The continuous treatment of the first three or four years following infection should be followed by the chronic, intermittent treatment. No period of treatment should be interrupted unless the serum reaction is negative. No patient should be allowed to go longer than three months following the chronic, intermittent treatments in the earlier years, nor longer than six months in later years without a serum test being made. By this method many of the serious and fatal consequences of syphilis will be obviated.

CONTAGIOUSNESS AND MATRIMONY

No opportunity for observations on the question of contagiousness appears to have come to those who have reported on the serum reaction. It is evident that no opinion on this point, so far as it concerns the serum reaction, could be expressed. It is equally evident that any solution of the question of matrimony for a syphilitic based on this reaction could be arrived at only by a study of the question of contagiousness, which is impractical. Any regulation of matrimony on this test alone would seem to be unfounded. However, after the period of time which clinically has been regarded as necessary to elapse before a syphilitic is considered safe to marry, his blood should be negative to the serum test, and the same injunctions for controlling his case as outlined above would be advisable.

PROTECTING THE INDIVIDUAL

The serum reaction is found positive in practically all cases of general paresis, and in a large percentage of tabes cases. While the percentage of positive reactions in tabes cases varies more or less, as reported by various investigators, this is perfectly conceivable when we remember the chronicity of tabes and also the frequency with which tabetics have been subjected to specific treatment, as a result of which abeyance of the virus activity may occur, but at the same time the pathologic changes of tabes continue to progress. We also know from clinical experience that chronic infections may have periods of quiescence irrespective of treatment.

Many visceral lesions of syphilis are first recognized post-mortem, and, as a matter of fact, fully half the syphilitics that come to post-mortem from other causes show some evidence of syphilis that was not recognized during life. Fully 50 per cent. of latent cases of syphilis give positive reactions. There can be little doubt that this is more than a coincidence, and that there is a direct association of the latter with the former post-morten facts. This, as well as the previous mentioned relation of the reaction to syphilitic manifestations, its failure with their disappearance and the return of both, all indicate that a positive reaction indicates activity of the virus. Recognizing this, it seems perfectly logical that we should expect to obviate many of these latter developments of syphilis by controlling the patient's condition with the serum reaction and medicating accordingly.

REACTION IN HEREDITARY AND CONGENITAL SYPHILIS

In hereditary syphilis the test is found, I may say, constantly, the reaction is strong and appears slow to disappear under treatment, possibly because the latter is not continued long enough, as is too frequently the case in congenital syphilis. Many workers who have reported on this phase of the question claim a concurrence of the reaction with the Colle and Profeta laws, while others maintain a directly opposite view, contending that neither law is sustained in the light of this test.

I have examined the blood of women who have borne syphilitic children, and who themselves were clinically apparently free from the disease, and the reaction was negative with their serums. I have also examined a syphilitic woman who had borne a healthy child who had not given the reaction up to the sixth week. On the other hand, the blood of a six-months-old infant born of a tertiary syphilitic mother gave a positive reaction, although this infant had never, so far as the history and examination could be depended on, presented any evidence of syphilis.

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STATUS AND DUTY OF THE MEDICAL OFFICER *

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The history of the military surgeon is the history of surgery, for he has always contributed freely of the knowledge gathered in the great school of the battlefield to his less fortunate brothers in civil life, the evolution of his handicraft keeping pace with the growth of medico-military lore. In the early days he was much less favored in academic accomplishments than now; in fact, there was a marked difference between the social standing of the surgeon and that of the physician of that time, for, while the latter was scholarly and refined, and usually succeeded in maintaining his caste, the surgeon was of lowly origin and followed a despised calling. In the dark ages surgeons were little more than body servants to the generals and officers commanding—often serving in the double capacity of surgeons and barbers. Needless to say, the skill and the numbers of such men were insufficient for the task of treating the sick properly; indeed, the common soldier of the early period was given but scant consideration in any event, for it is said that Xenophon had but eight surgeons with his ten thousand troops.

Throughout the middle ages, military surgeons were still inconspicuous for any good purpose they served; they had no regular place in the ranks nor did their names appear on the pay rolls; they took such compensation as they received in gifts from grateful patrons. Out of the stormy centuries of the middle ages, when the profession of arms was occupying the first place in human endeavor, grew a greater appreciation of the need of organized effort to minister to the sick and wounded while bearing arms. Naturally the French and English were the most active in this attempt, and we find Ambroise Paré in the sixteenth century, and later Percy and Larrey, under Napoleon, exercising a marked influence on the practice of the day, for they were men of strong and resourceful personality.

The eighteenth century was well advanced, however, before any of the customs which obtain to-day were instituted, for, in Great Britain, it was not until 1751 that surgeons were uniformed in the dress of the troops with which they enlisted. The physical examination of recruits was begun in 1745. Coming down to the last century, the German sanitary corps was made a part of the German army as late as 1873. In 1860 the first British army medical school was opened at Chatham, since which time the modern army surgeon may be said to have developed. In 1878 the British Royal Army Medical Corps was formed.

In the United States, the early army medical records repeat the stories of the European wars—splendid achievements of individual surgeons of marked genius, but little concerted action on going into battle, and none when on a peace footing. Means of caring for the sick and wounded on the battle field and in camp long have been sadly inadequate, and improvements always have been greatly hampered by a want of proper understanding of the immutable laws of sanitary science and cooperation therein by officers of the staff and line. Until a year or so ago the young cadet at West Point was taught more of the care and health of the horse than he was of

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* Read at a meeting of The Fifth Infantry, and Naval Reserve Officers' Association, at Quincy, Ill., Dec. 8, 1909, and before the Adams County Branch of the Illinois State Medical Society, at Quincy, Dec. 13, 1909.

that of the men whom he was destined to command; in other words, he was so intent on studying how to destroy the enemy that he gave no thought to saving himself from destruction by deadly internal foes. Naturally the sick soldier always has been a great impediment to the movements of the army corps, and it was never even suspected until a few years ago that most of the camp sicknesses were preventable.

It also may be said of the military operations which have been conducted by the United States more recently that a grievous failure to grasp the true relation of the medical department to the army as a whole has no doubt cost the lives of many thousands of our bravest and best citizens; for it is estimated that, in most of the campaigns of the past, more men have been killed or incapacitated by disease than by the bullets of the enemy.

What, then, is the status and duty of this organization of specially trained men who fight under the banner of the Red Cross? For, whether they enlist with the organized militia, the army, the navy, or the Army Reserve Medical Corps, their function is the same; first, the preservation of the health of the command by the prevention of disease, and, second, the prompt restoration to duty of all wounded men whose disabilities admit of a cure. Since, as already stated, more men are cut down by disease than by bullets, the first of these duties is the greater; and this fact is emphasized by the statistics gathered at the concentration camps of the United States forces during the few months that they were ordered South in 1898, where men were allowed to sicken and die who never heard the sound of battle, save perhaps in their delirium. By comparing these recent events in a modern army, composed of the flower of American youth and having every facility for care at hand, with the experiences of the Japanese army while operating against the Russians for nearly two years in a wild and foreign land, destitute of bases of supplies for the barest necessities, we find a very creditable showing for the Japanese, remarkable for its low sick-rate. The reason is that to-day no other country holds its military surgeons in such esteem and respect. This nation, just emerging from a medieval civilization, has been quick to profit by the mistakes that the western world has only gone on repeating. The Japanese called into service a scientific body of medical men and followed implicitly the suggestions of these expert sanitarians; camp sites, food, water, shoes, clothing, the personal habits of the men, their preparation for battle—every detail of the organic life of these troops was passed on by their medical department, and that untrammeled by official influence or political despotism. Its ruling was paramount—the last word on sanitation.

The scientific awakening of the last two decades and the application of the principles of sanitation to commercial and industrial life are in evidence on every hand. Large employers and manufacturers now consider it good business policy to conserve the health and energy of their operators as a factor in a larger output from their labors. So, too, this nation when it took over the reconstruction of an oppressed people in Cuba, at once found it necessary to engage in sanitary, as well as political government. Our national problems in these piping days of peace have been met more effectually than they could have been in the earlier days when our interests were less world-wide, and knowledge less complete. The addition of the Philippines, Porto Rico, the Canal Zone in Panama, and other tropical possessions has thrown a greater responsibility than ever on our military surgeons, the sanitary engineers of this country. These great responsibilities have made necessary the manning of garrisons and ships of the United States with men unaccustomed to life in the tropics, and in the successful accomplishment of this end the medical departments of all arms of the service have been ever in the vanguard, so that now these territories have been rendered habitable for troops and increasingly healthful for the natives.

General Leonard Wood, who cleaned that pest-hole, Havana, of yellow fever in less than one year, was first a well-trained physician. Drs. Reed, Carroll, Lazear and others, who, by their experiments on the nature and mode of infection of this disease, made it possible to accomplish such a miracle, were also U. S. Army officers. Col. William C. Gorgas, chief sanitary officer of the Isthmian Canal Zone, another U. S. Army surgeon, profiting by his earlier experience in Cuba, has solved the riddle of the Panama Canal, converting a death-trap and slough of despond into a veritable health resort; and thus the dream of adventurers, navigators and engineers at last is coming true. The death-rate of 176.97 per thousand, under de Lesseps, in 1885, now has fallen to 3.84 per thousand among its male white population, under the direction and control of the United States, since the venomous mosquito has been banished.

It is also interesting to note the vast amount of human endeavor that has been contributed to the public weal by the military medical officer in foreign lands, for Science truly knows no country, and to the military surgeon,

"In all lands and thro' all human story
The path of duty is the path of glory."

As an evidence of this fact we may recall that the first observation of the parasitic organism of malaria in the blood of malarial patients was made by a surgeon of the French army, Laveran, who worked it out in the solitude of a military hospital in far-away Algeria in 1880; although the U. S. Army Reports of 1859 show that in that year an American medical officer, John K. Barnes, had called attention to the probability that this disease was of parasitic origin. The knowledge that the mosquito is the medium of infection in malaria is of still more recent date, and this we owe to an English army surgeon, Major Ronald Ross, whose discovery has saved thousands in India alone, since he announced his theory in 1897. Another of this brave band of grim fighters of the invisible was Bruce, who, while serving the British Empire as patriot and scientist, rid the Island of Malta of Malta fever, a pestilence which had scourged it since before the days when it sheltered that gallant company of Hospitallers, the Knights of Malta.

In an address on "The Nation and the Tropics," given at the London School of Tropical Medicine in October last, Dr. William Osler so fitly has eulogized one of the leaders of these forces, "one that sought but Duty's iron crown," so fittingly that I cannot refrain from quoting the passage entire. He says:

> No one has expressed more deeply the sentiment of lonely isolation in the tropics than Ronald Ross in his poem, "In Exile:"
>
> "Long, long the barren years;
> Long, long, O God, hast thou
> Appointed for our tears
> This term of exile."
>
> Few have been able to sing with him the pæan of victory when he discovered the mode of dissemination of malaria through the mosquito—
>
> "Seeking His secret deeds
> With tears and toiling breath
> I find thy cunning seeds
> O million-murdering death."

And the pathway of victory is strewn with the bodies of men who have cheerfully laid down their lives in the search for the secrets of these deadly diseases—true martyrs to science.

What is true of the prevention of epidemic diseases which have proved decimating to troops stationed in the tropics should be equally true of typhoid fever and other camp diseases peculiar to more temperate latitudes. In the experiments carried on in the English and German armies, and on the U. S. troops now serving in Porto Rico, it has been shown that the immunity acquired by serum vaccination of men exposed to typhoid fever has decreased the sick-rate from this disease from 12 to 3 per thousand. Lord Kitchener has recently said that the improvement in the condition of the British army in India during the last ten years has been equivalent to adding more than another regiment to its strength. "In pace paratus" should ever be the watchword.

The military and political destiny of the great nations of the world is intimately bound up with the progress of medical science; for the appreciation by their people of the natural and physical laws which govern the most economical maintenance of armed forces in the event of war will keep step ever with the march of the latest scientific achievements that have any bearing on maintaining the fitness and efficiency of the individual soldier. On this will follow a fuller control and authority in all sanitary measures by the medical officer, the logical military sanitarian.

How, then, may this standard best be attained? In the national guard and naval reserve organizations we have our limitations in time of peace, by reason of the lack of opportunity for practical work in the short tour of duty in camp and afloat each year; yet in time of war we would constitute the major part of the land and naval forces, and it would be up to us to make good. We, therefore, must look to the regular forces as the working models in this work and be eternally prepared by lending our every effort to the extension of the value of tours of instruction for men, of the time of such instruction, and in the establishing of local schools for study by officers. It is a matter of regret that by reason of their smaller number the volunteer medical officers cannot avail themselves of state, or central professional medical schools for the interchange of ideas.

The needs of the situation could be met by the endowment of chairs of military surgery and sanitation in the leading medical colleges throughout the country, open and free alike to all military officers as well as to undergraduates. A natural channel affording a medium for presenting and discussing all matters germane to the subject of medico-military interests might readily be formed, too, by assigning this branch to some correlated section in the state and national medical societies, where the medical officers among the membership, and those of the army and navy at large, could get together at the annual meeting to their mutual profit and pleasure.

As a result of this activity would follow a growing interest by medical men, both of the organized and unorganized militia—for all are alike eligible for service—and a working knowledge of military medical affairs would soon engage the attention of all medical societies to an extent quite unknown now, and to the lasting good of our military organizations.

Looking toward this end, it might be wise to expand the Section on Preventive Medicine and Public Health of the American Medical Association so as to include at once its public and military phases under the heading of Section on Preventive Medicine, Public Health and Military Sanitation, or some other suitable descriptive title. The British Medical Association already has a Section of Navy, Army and Ambulance.

Perhaps the greatest need in the state militia organizations is that they be provided with improved facilities for maintaining regimental and field hospitals in conformity to the regular types to facilitate the training of ambulance companies; but this equipment is now not easily obtainable, because of the indifferent and penurious support of our legislators and their fatuous confidence in the ability of the American soldier to fight when he is called on, however unprepared. The medical officers should also seek by every opportunity to master the manual on the handling and training of men, besides all those details which administration implies. Unfortunately the civil duties of a surgeon count for little in military experience, other than in the routine treatment of sick-call; but, given an occasion, the trained volunteer surgeon should, and the regular certainly would, be competent to take over all the sanitary departments of troops in the field, assuming full charge in every particular.

Through the rare executive ability of the late Col. Nicholas Senn as Surgeon-General of the State of Illinois work was begun along these lines; for he was an authority on military medical science, having studied at first hand the methods of all the leading armies of the world; and as a result our medical department is now, perhaps, more advanced than that of any other state in the Union. It was through his personal effort that the Association of Military Surgeons of the United States and the Association of Military Surgeons of the State of Illinois were instituted; these have proved of the greatest value to the whole body, bringing into touch the brightest minds in the profession for the study of the serious problems of the organized forces.

The Army Medical School at Washington is thrown open now to volunteer officers of the land forces, admitting them equally with the regular army officers to all of its privileges, and to make it easier for them the preliminary qualifications have been waived in a large measure. A similar arrangement has been recommended by the Navy Department in connection with the Naval Medical School, especially for medical officers of the Naval Reserve; this recommendation is now awaiting the necessary legislative action. Perhaps in no other way could so much real benefit be conferred on the personnel of the state militia as through the helpful associations that these special courses offer. It is a regrettable fact that as yet but few men have availed themselves of this opportunity; possibly by reason of the loss incurred through neglect of business for several months, and the expense incident to the course, for there is now no appropriation providing for quarters and pay in the case of militia officers attending.

In the navy a new mark was set when the executive authority on the hospital ships was transferred from the line to the medical department, an arrangement which now is giving entire satisfaction. Another era will dawn when some of the traditions of the army also have been set aside and a wider advisory sphere of usefulness and responsibility granted the medical department, whereby it may become an integral unit fully manned, with complete control of all subordinates and auxiliaries, working independently and smoothly along with the fighting forces.

On the foundation already laid let us go on building according to the latest scientific attainments, until military life shall be made at least as sanitary and wholesome as the homes that our young men leave when they enter this noble calling.

In this paper I have not sought to present the many specific duties of the medical officer as defined in the regulations, but rather to suggest the larger scope of military hygiene and sanitation, in which the members of the medical department and the officers and enlisted men of the line must labor side by side—for we are, indeed, our brothers' keepers. And, growing out of this harmony and cooperation, coupled with an awakened intelligent public sentiment, will surely blossom the perfection and preservation of an improved physique, morale and effectiveness throughout all branches of the armed forces of this nation.

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THE ARMY MEDICAL CORPS AS A CAREER

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Dr. Osler, in an address[1] before the graduating class of the Army Medical School in 1894, pictured rather clearly the general conception of the life of an army surgeon as held by the medical profession at large. In somewhat varied guises, his attitude is reflected in the advice that is apt to be given when a student of medicine, or a recent graduate, is considering the army as a career.

Also, as will appear, Dr. Osler's words indicate a lack of definite knowledge on the part of general practitioners as to the duties and opportunities of a medical officer. In beginning his address he says:

> For me the Army Medical Department, so far as particulars are concerned, means a library with unsurpassed facilities, the worth of which is doubled by the liberality of its management; a museum in which I have spent some delightful hours; an index-catalogue, which is at my elbow like a dictionary; and the medical history of the late war. . . .

Later, in attempting to cheer the surgeon who is about to enter on a career in which, as Dr. Osler intimates, there will be few cases, little opportunity for contact with medical centers and isolation from professional colleagues, he remarks on the pecuniary advantages and admonishes the beginner that "faithfulness in the day of small things will insensibly widen your powers, correct your faculties and, in moments of despondency, comfort may be derived from a knowledge that some of the best work of the profession has come from men whose clinical field was limited but well tilled." Again, he remarks that "after all, the isolation is neither so enduring nor so corroding as might have befallen your lot in the routine of country practice."

That a physician of such broad knowledge and such keen perceptions should have held these views is not surprising, for few physicians in civil practice have opportunities of observing the medical service at army posts. They argue that, since soldiers must be physically sound on enlistment, there can be comparatively little disease except that of venereal origin. As a result the advantages of the regular and sufficient pay must be balanced against a very narrow professional experience.

This article is not intended to create an impression that the average soldier is an invalid. Nor is it desired to intimate that the army surgeon is constantly holding clinics of peculiarly interesting cases. But by emphasizing the fact that an army post contains not only soldiers but also women and children, and by briefly outlining the manner in which the physicians are selected and trained for the corps, I hope that I may show that the isolation from professional colleagues is not serious, and that the entrance into the medical corps does not signify a future "professional degeneration"—a prophesy I have heard often expressed.

EXAMINATION AND PREPARATION

On entering the medical corps at the present time a physician must pass, with an average of 80 per cent., a preliminary examination usually covering a period of six days. This consists of a physical and professional examination. If successful, the candidate is commissioned as a first lieutenant of the medical reserve corps until his graduation from an eight months' course at the Army Medical School in Washington. During this probation period he receives $2,000 a year, an allowance of $36 a month for quarters, and an ample allowance for fuel and light. At the school excellent courses requiring thorough preparation and diligent attention are given in clinical microscopy and bacteriology, military hygiene, military surgery, military and tropical medicine, sanitary chemistry, operative surgery, ophthalmology and optometry, x-ray work, hospital corps drill, and duties of medical officers, medical department administration and customs of the service. The scope of these courses may be realized when it is mentioned that a recent graduate in medicine who had studied under Professor Ziegler of Freiburg and Professor Welch of this country found no opportunity for reminiscences during the hours devoted to pathology and bacteriology. On graduation the officer is commissioned in the medical corps as a first lieutenant. His pay for the next three years, until his captaincy, remains the same. On changing station, mileage at the rate of 7 cents a mile is allowed, and 5,100 pounds of household effects are crated and delivered to his new post. A leave of thirty days is obtainable each year.

The professional opportunities of the service are not fully appreciated by the profession at large, so it may be permissible to comment on the range of diseases which may be met in this country. In contrast to the rather general impression, venereal cases play quite a subordinate part in the sum total of disease at a post. There is, to be sure, venereal disease, but a routine treatment is usually adopted, and after the diagnosis is assured there is little attention paid to this form of sickness. Records are kept for reference and syphilitic patients are compelled to continue treatment for a definite period after leaving the hospital. Under existing army regulations this is easily possible, whereas in most civil clinics the patients are lost track of after a month or so. Accordingly, even with treatments covering long periods, little time has to be devoted by the surgeon to venereal disease. This is fortunate in that a surgeon has ordinarily many other cases requiring study and thought. When one considers that on an average post there are from 50 to 100 women, counting the wives and relatives and servants of the officers and non-commissioned staff, 25 or more children and usually from 300 to 800 men, it may be seen that a surgeon has a rather varied practice in general medicine, surgery, children's diseases, gynecology, obstetrics and other specialties. Instead of a narrow practice confined to a few cases, it is extremely general.

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[1] Osler, William: The Army Surgeon, in *Æquanimitas and Other Addresses*, p. 103.

RANGE OF PRACTICE

Reviewing the cases of three months at a certain eight-company post, one notes the following cases:

Diseases of the Mouth, Tonsils, Pharynx and Esophagus.—Mercurial stomatitis, ulcers of the tongue and mouth, alveolar abscesses, tonsillitis, diphtheria and pharyngitis.

Diseases of the Stomach, Intestines and Peritoneum.—Gastritis, acute and chronic, gastralgia, constipation, diarrhea, gastroenteritis. enteritis. colitis, peritonitis, appendicitis and malnutrition and digestive disturbances caused by the presence of nematodes and cestodes.

Diseases of the Genitourinary Tract.—Uremia, chronic parenchymatous nephritis, tuberculosis of the kidney, rupture of the bladder. cystitis. gonorrhea. pelvic inflammation, vaginitis, urethritis, endometritis. prolapsus uteri and syphilitic infections in practically all forms.

Diseases of the Circulatory and Respiratory Systems.—Angina pectoris, endocarditis, mitral insufficiency, aortic stenosis, bronchitis. asthma, lobar and lobular pneumonia, pleurisy, pleural effusion and filaria nocturna.

Other Diseases.—Rheumatism, tuberculous adenitis. scabies, sciatica, lumbago. alcoholism and neuralgia.

Conditions Requiring Operative Measures.—Ruptured bladder, appendicitis. placenta prævia, retained placenta, tuberculosis of kidney, osteoplastic cranial operation for bullet wound of cranium, fractures and minor injuries.

A careful comparison with previous periods shows that this range of cases during the past three months is not exceptional at this particular post, and yet, comparatively speaking, this station referred to is by no means a large one.

EQUIPMENT OF HOSPITALS AND PROFESSIONAL OPPORTUNITIES

All hospitals are thoroughly equipped for every kind of surgical work, and the medical department supplies all needs. In most posts there are also *x*-ray machines and full photographic equipment. The laboratories contain every instrument for clinical study. Original investigation is encouraged, and to those following the progress of tropical diseases it is needless to enumerate the important researches that have been completed by army surgeons.

At each hospital the leading American and several foreign medical journals are received regularly. From time to time additions are made to the hospital libraries, so that an army surgeon finds a rather complete library awaiting him at each post. Should any special work be deemed necessary by the surgeon, it is forwarded by the medical department. This would surely indicate that a physician in the service who allows himself to neglect professional studies has himself and not his environment to blame, and such a man would probably remain in the service only until his next examination for promotion. Additional stimulus to study is also found in the fact that frequently surgeons who manifest an especial interest in any particular branch of medicine or surgery are sent to medical centers where their studies can be continued.

As for the isolation referred to earlier in this paper, it is possible that at times a surgeon may be the only physician at a post, but this is rather exceptional at present, and the tendency is to concentrate troops, and have larger hospitals and more medical officers.

When in time the medical profession learns of the true position of the army surgeon, of his excellent opportunities for professional development and of his incentive to serious study, then the advice to the medical student will be to enter this career, which offers such exceptional chances for successful study and research.

PELLAGRA

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Not the least interesting feature of the medical history of recent times, which has been so fertile in sensational scientific events, has been the sudden coming to the front of the problem of pellagra. Except in the experience of a few practitioners who occasionally encountered undisputed cases of pellagra, this disease had passed almost unnoticed for a number of years; but it has of late suddenly assumed in medical and public attention a rank hardly equaled by apparently more important public problems.

It is not desired to detract in any way from the importance attached to pellagra as a direct and serious danger to public health, a danger which is but too well attested by experience in the past and in other countries; but it may very well be that, on account of the recent discovery of a considerable number of cases in this country, and especially through sensational disclosures, mostly through the lay press, the situation has been made to assume an aspect more serious than is really justified.

The problem of pellagra is surrounded with such difficulties and obscurities that much study should be given to it before attempting to formulate definite conclusions. Scientific circumspection is the more strictly to be enjoined in that, in addition to the novelty and the unfamiliar aspect of the disease, by far the greatest number of observations have been made in hospitals and insane asylums where patients have drifted at last in the advanced stages of the disease, or else when suffering from very complex ailments. Under such circumstances the picture of the disease would naturally be obscured or distorted and the diagnosis, even by the most experienced observer, would be difficult. It is assumed that this accounts for the harrowing pictures of the disease lately drawn and for the pessimism largely prevailing in regard to pellagra.

However conflicting on some particular points, and however much wanting the evidence may be under particular circumstances, it cannot be denied that those observers who have given the closest attention to pellagra have all looked on alimentation by damaged corn as the cause of the disease. Furthermore, those countries of the old world that have been forced to a determined fight against pellagra have all centered their means of defense on that theory, and it has rewarded them with such a fair measure of success as to encourage them to continue the fight on the same lines. The occurrence of analogous intoxications from other kinds of damaged grain, such as ergotism, furnishes a strong argument in favor of accepting zeism as a factor in the pathogenesis of pellagra.

Pellagra was first noticed in Europe in the countries situated near the natural northern limit of corn culture, where the ripening of the grain was often imperfect. The variations in the severity of the disease seemed to correspond with variations in the crops. Thus, after an unseasonable year, the disease would break out in sudden explosions in the spring and assume an epidemic character, and then with the coming of better crops its violence would abate and only sporadic cases would occur.

Much is to be learned from the extended experience of European investigators whose studies on this subject have extended over a century and a half.

It is an endemic trophic disease of toxic origin, especially with vernal manifestations, and characterized by gastrointestinal, cerebrospinal and cutaneous manifestations. In its attenuated or light forms, pellagra may be ushered in by languid, tired feelings, disinclination for any kind of work, more seldom by nausea and vomiting. A few patients may experience a particular feeling of heaviness about the head or of vertigo, a look of sadness or rather of mental depression, as evidenced by the apathy displayed, or by the neglect of duties hitherto cheerfully discharged. Most often pellagra has no precursory symptoms and the disease is at once ushered in by its cutaneous manifestations. The regions most commonly affected are the dorsal surfaces of hands or feet, upper parts of the chest and sternum, the neck, and such parts of the arms and legs as are usually uncovered. Very seldom is the face affected.

The cutaneous lesions of pellagra must be considered as *erythema solare*, the result not of heat, but of the actinic rays at the violet end of the spectrum. These lesions, beginning with the spring, sometimes sooner if the winter happens to be mild, confine themselves to the unprotected parts of the skin, lasting generally during July and August, to desquamate in the fall, leaving during the winter and until the next vernal exacerbation a glossy, erythematous skin. Gaetano Strambio, in the latter part of the eighteenth century, noted that by protecting the already affected skin against insolation it can be restored to its normal condition, but the patient does not escape from the other effects of the disease. The cutaneous lesions reappear the following spring and may thus recur for several years.

In the severe forms the gastrointestinal symptoms are more pronounced, including stomatitis, vomiting and diarrhea. The nervous system is more gravely affected, depression and melancholia being extreme and diplopia, vertigo and hallucinations being experienced. A feeling of heat, muscular contractions, involuntary movements, convulsions and epileptiform attacks are observed. There is extreme weakness, especially of the back and lower limbs.

These symptoms, marking a gradual degeneration or at least an impairment of the nervous system, may be associated or not with delirium. This delirium may manifest itself under two forms—acute and chronic. The acute form may prove fatal in a few days and is attended with a high fever and a hard and vibrating pulse. Some patients are dejected and gloomy, refusing to eat and drink or even to answer when addressed. Others are noisy and obstreperous, or even furious and turbulent, and many, according to Strambio, by moving the head to and fro seem to imitate the tolling of the bells. The chronic delirium—pellagrous mania—according to the same author, assumes different forms. One of them is a kind of dementia; another form is marked by a loss of memory and attention—amnesia—and a third, much more common, is a melancholia, most often religious, with an impulse toward self-destruction, especially by drowning—hydromania. This chronic delirium is almost always incurable, though it sometimes disappears after several years of existence. In the insane asylums of some Italian provinces pellagrous maniacs constitute a considerable proportion of the inmates. According to Marie, pellagrous insanity is on the decrease in France. In other countries the number of pellagrous insane is always considerable.

To such incurable and desperate states of organic degradation has been given, in the Italian hospitals, the name of *tabes pellagrosa*, the exact meaning of which should be more precisely defined. We are here dealing with a most important point concerning pellagra and one that has contributed in no small degree toward obscuring the diagnosis and causing the disease to be misunderstood. The denomination of tabes pellagrosa has been applied to two different states, one of which is but the last degree of pellagrous intoxication. The other represents, so to say, one mode of its termination, when the toxic infection, having accomplished its deadly work, leaves the system in a cachectic condition similar to that caused by any other dyscrasia in its ultimate state, or by any other process of denutrition.

If the statement of T. Roussel is adopted as true, that most pellagrins found in an incurable state in the hospitals and insane asylums belong to this second category, there is uncovered one of the main sources of error which has caused pellagra to be mistaken for and mixed up with all sorts of cachectic conditions, thereby giving rise to those diagnoses so lightly formulated and so unjustly multiplied, pellagra of the insane, sporadic pellagra, etc.

From the foregoing I may conclude that pellagra is not to be considered, as has been done by so many observers, and is still done, as an ill-defined pathologic condition, a kind of diathesis, a gastrointestinal affection accompanied or followed by various nervous accidents, but rather as a clearly defined affection characterized by phenomena which plainly can be divided into two successive pathologic states: first, a primitive toxic, chronic disease, with vernal manifestations, the progress and degree of which are governed and determined by the occurrence of repeated intoxications; second, a cachexia and a consecutive morbid state resulting from the intoxications and from mixed debilitating conditions through which the toxic disease has been originated and has developed itself.

Now that pellagra has been raised to the high importance of a national hygienic problem and the attention of the medical profession centered on it, there can be no doubt that the obscurities that still surround it will soon be dispelled and a flood of scientific light thrown on it.

A STUDY OF THE ADMISSIONS TO THE U. S. MARINE-HOSPITAL, CHICAGO

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The following statistics as to the change in the admission rate for certain diseases during the past twenty-five years among the patients in the United States Marine-Hospital at Chicago are believed to be of some interest.

Hospital statistics are not usually very interesting, and are, moreover, apt to have their values seriously impaired by the difficulty in estimating rightly the effect of the many factors which qualify their apparent import, as lack of definiteness in diagnosis, changed conditions as to staff, or varying character in the patients.

The figures for the Marine-Hospital at Chicago, however, as for the other hospitals of the service, while perhaps of no more interest than others, are singularly free from difficulties due to variability of attendant conditions, and this for the following reasons:

1. All diagnoses are made in strict accordance with an official nomenclature.

2. The patients are drawn from persons of one definite occupation and are almost all adult males between 21 and 50 years of age.

3. The method of recording the facts is uniform and fixed.

I doubt if there are two dozen civil hospitals in this country in which the class of beneficiaries, the system of record, and the nomenclature have remained so nearly uniform for twenty-five years.

The diseases selected for investigation were: (1) those among which any marked change in incidence would indicate some distinct change in sanitary, climatic or social conditions; and (2) diseases not appreciably affected by such conditions, diseases whose very uniformity of incidence would serve to make more striking change in admissions for the diseases of the first group.

In the first class I have placed enteric fever, malarial fevers, rheumatism (acute and chronic), syphilis, tuberculosis of lungs, acute bronchitis and pneumonia; in the second, cardiac diseases and kidney diseases.

About one in four patients applying for relief at our dispensary are sent to hospital; others receive treatment as out-patients, and only the actual hospital admissions have been considered. These vary in number from year to year; the average for the twenty-five years has been 560, the figures varying in round numbers from 400 to 800. The year is the "fiscal year," July 1 to June 30.

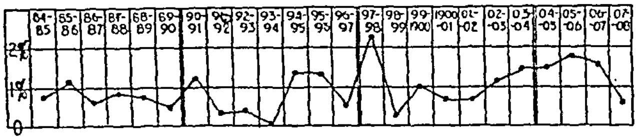

Chart 1.—Percentages of admissions for diseases of the kidney.

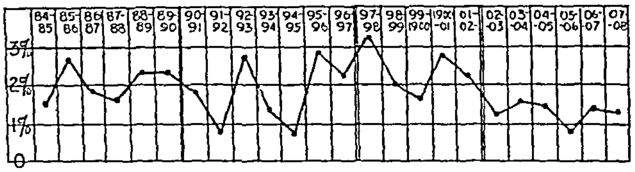

Chart 2.—Percentages of admissions for cardiac diseases.

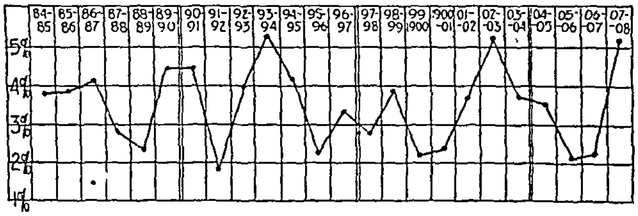

Chart 3.—Percentages of admissions for bronchitis.

One very striking fact is that among 13,500 admissions in twenty-five years there were only 9 cases of diabetes.

The charts for the diseases in the second group are first given, and a glance at them shows at once just such a lack of change in incidence as had been expected. The percentages vary a little from year to year, but the range above and below the mean are about equal.

The charts given by the diseases of the first class are found to fall naturally into two divisions: (a) those whose percentages are found to have been little, if at all, affected by changes in sanitary and other conditions, though their character would have led one to expect differently, namely, bronchitis and pneumonia; and (b) those whose percentages show very distinct changes.

I confess that I am somewhat surprised at these figures. For reasons to be explained in connection with the rheumatism table, and because the development of the use of the microscope for discovery of tubercle bacilli has eliminated many cases that might formerly have been diagnosed as bronchitis, I had expected that the table would show a progressive decline in the admissions for bronchitis, interrupted here and there by the occurrence of increases due to influenza epidemics.

The increases of the influenza years are, indeed, shown, but the expected decrease does not appear.

The same remarks apply to the pneumonia rates.

The enteric fever table shows just what was expected: a rise, a decided fall and then a steady increase, the initial rise and decline coinciding closely with the condition of the city water before and after the opening of the drainage canal, the steady rise of the last four years being a part of the well-known, but not completely explained, rise in the enteric rate among the shipping around the great lakes. The final figures leave the rate 4 per cent. against 1.4 per cent. twenty-five years ago.

The tuberculosis chart is something like the enteric chart: a sharp rise, a sharp fall, a fairly even average for a number of years and then a steady rise.

Now, there are certain facts to be considered in connection with this chart. First, the sudden fall in the number of admissions from 1889 to 1892 (from 9.4 to 4.4 per cent.) coincides exactly with the general introduction of the issue of modern microscopes to the service hospitals and the general introduction of the practice of examining sputum. One would have expected that this would have resulted in a sharp rise in the admission rate; on the contrary, it dropped more than 50 per cent.

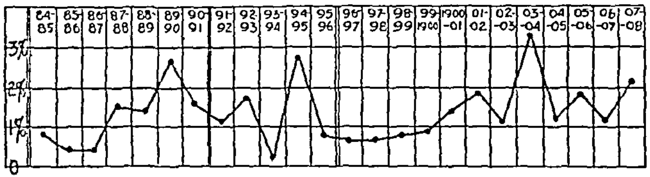

Chart 4.—Percentages of admissions for pneumonia.

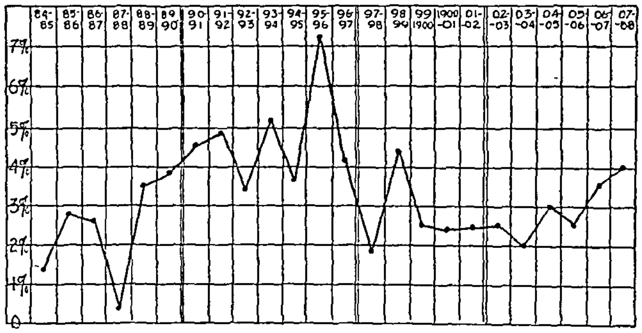

Chart 5.—Percentages of admissions for enteric fever.

In 1897-1898 the service opened at Fort Stanton a sanatorium for its tuberculous cases, and from 1901 probably 33 per cent. of the cases have been sent there, the percentages for the last three years being 40, 35 and 56.5.

Formerly patients were admitted, improved and were discharged, and were readmitted, possibly more than once, either here or at some other service hospital, each time of admission counting necessarily in the tables as a new case. I am sure that at least 15 per cent. of the admissions for tuberculosis prior to 1900 were readmissions. It follows thus that for the decade from 1890 to 1900 the net admissions were just about 4 per cent. and were strikingly uniform in number. Now, from 1900 on, the readmissions of patients coming in the same year as original admissions ceased to be an important factor. Yet just at this time apparently begins the steady increase of from about 1.5 to 2 per cent. a year.

Turning to the out-patient figures, we find that their numbers have decreased to the vanishing point; last year there were three, and year before none. Now, of course, this is due to the policy of treating as nearly as possible all cases of tuberculosis in hospital, a policy I have strongly enforced for the past four years, and I have, therefore, examined the out-patient figures for a number of years back to see if they gave any explanation of the gradual rise in the admission rate.

They do not explain it; on the contrary, they emphasize it, for the total out-relief and hospital relief in 1898, the year before the segregation plan got to working, was exactly the same as last year, when the system had been ten years in operation. Moreover, the figures which I have prepared for the whole service during the past twenty years show a decline in the amount of tuberculosis treated.

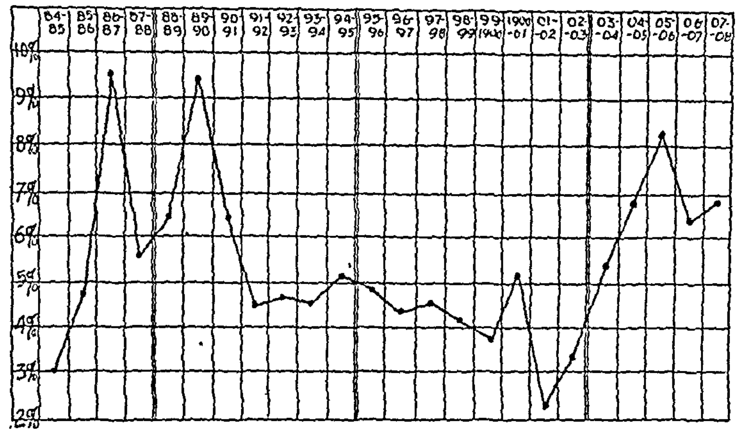

Chart 6.—Percentages of admissions for pulmonary tuberculosis.

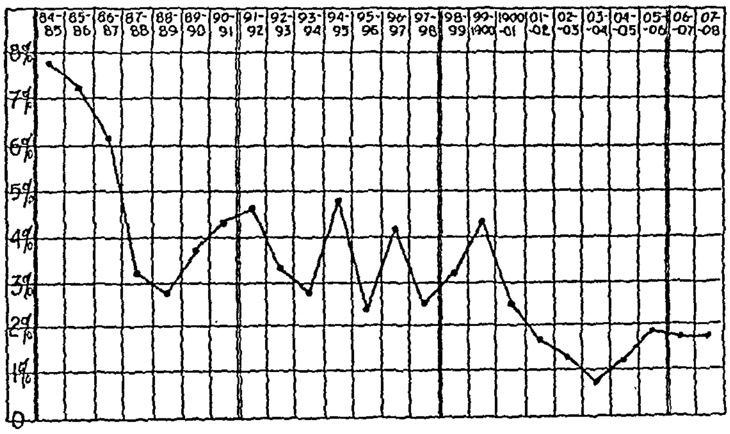

Chart 7.—Percentages of admissions for malaria.

The Chicago figures, therefore, seem to indicate clearly an increasing prevalence of pulmonary tuberculosis among the merchant seamen frequenting the port, in the face of a declining rate for merchant seamen generally.

We come now to the three most striking results of the investigation, viz.: the charts for malaria, rheumatism and syphilis.

The malaria chart illustrates strikingly the necessity of understanding all of the qualifying circumstances if one hopes to make intelligent deductions from medical statistics; it also illustrates how often such qualifying circumstances are entirely outside of the normal professional horizon—are, in fact, dependent on economic or industrial causes. At first glance it shows a very striking and steady decline in malarial admissions, from nearly 8 per cent. of the total to below 2 per cent., in round number a decline of admissions for malaria of 75 per cent., giving the impression of a great improvement in the prevalence of malaria about the lakes.

There has certainly been a great improvement in this respect as far as concerns Chicago and vicinity, for twenty to twenty-five years ago there were suburban sections and sections along both north and south branches of the Chicago river which were distinctly malarious; but the two main factors in this improvement are industrial. They are the decline in steamboating on the lower Mississippi and the rise of the great lumber, iron, copper and transportation corporations engaged in business about the lakes.

Formerly when navigation closed on the lakes there was an extensive migration synchronous with that of the ducks and geese. When serving at St. Louis, Cairo and Memphis I came to know a good many of the regular migrants who came and went year after year, but the migration was then already becoming a thing of the past.

It was these men who, coming north infected, formerly furnished a large quota of the malaria which was responsible for from 6 to 8 per cent. of our admissions. We still get a few such cases every year, but not many.

There was formerly a large fleet of schooners and small steamers on the lakes engaged in carrying lumber, etc. They entered the smaller harbors, and often loaded almost alongside the shore. Moreover, they discharged along the south and north branches and were apt to lie some time at the bank. At the present time the large steamers load mechanically with great rapidity at great terminals, often miles from the close vicinity of the forests and mines, and discharge as quickly.

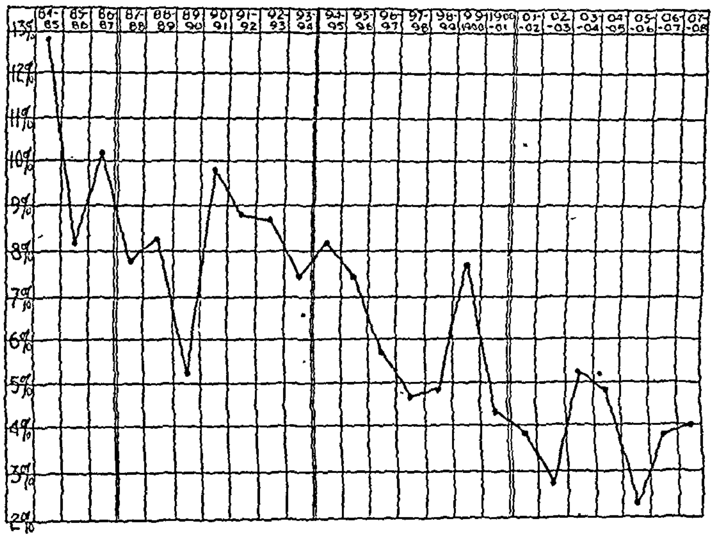

Chart 8.—Percentages of admissions for syphilis.

The chart mirrors these changing conditions very clearly. The decline in the river shipping was rapid after 1885 and coincides with the sharp drop in the curve. Then for about ten years this apex vibrates up and down with fairly even excursions above and below 3.5 per cent; and, finally, there comes the sharp decline of the past decade, coinciding closely with the rise of the great companies and the disappearance of the schooners.

Here at last in the syphilis chart is one which can be considered entirely on the basis of the sanitary or medical facts in the case; and I cannot see how it can fail to interest greatly those concerned with the "venereal peril." Here are the figures of admissions for twenty-five years among 13,500 young adult males of as nearly as possible the same class and suroundings, and they show a decline from 13 per cent. to 4 per cent. of the admissions, and a steady regular decline as well.

A word as to diagnosis. The service regulations require that the cause, not the manifestation, of a dis-case he stated. That is, for example, a tabes due to syphilis is entered "syphilis, secondary," and under "subsequent complications" it is entered "tabes," in brackets. This is the uniform and prescribed system; so the question of terminology cuts no figure in the result shown by the chart.

The decline is certainly not due to increase in the morality or sobriety of our beneficiaries, nor in their character; indeed, the latter has declined, the English, Irish and American sailors having to some extent given place to a very low order of foreigners. These last possibly drink less whisky and certainly fight less than their predecessors, but I think that they are less often married.

What, then, is the cause? Three solutions suggest themselves:

1. A decline in the prevalence of syphilis.
2. An improvement in diagnosis and treatment, resulting in fewer of the severe eruptions and crippling, late lesions.
3. An attenuation of the virus by reason of a more general syphilization of the class.

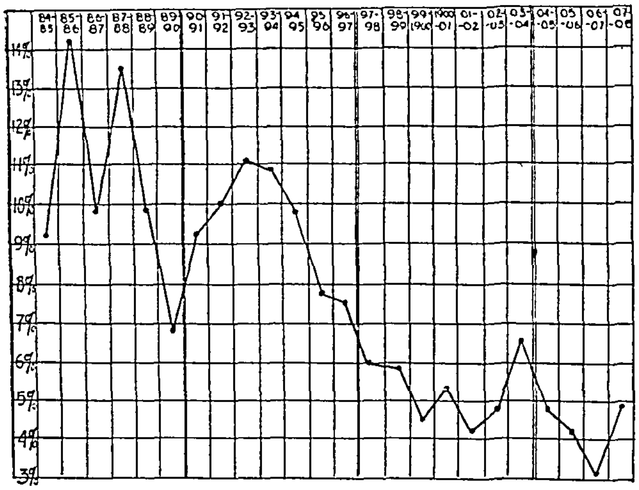

Chart 9.—Percentage of admissions for rheumatism.

I do not believe that the first is true. The statistics of the country generally are said to tell a very different story.

The second explanation is unquestionably sound. We, like the profession at large, twenty to twenty-five years ago did not so accurately draw a distinction between chancre and chancroid, and so more patients remained without constitutional treatment until their secondary stage was well developed; moreover, the very number of such cases made us less considerate of the individual patient, and they were discharged earlier and were hence more apt to relapse in later years.

The third reason is the one which, I think, is mainly responsible for the decline. It is a personal opinion merely, I know, but I have held it for some time; and, indeed, I began this inquiry because I thought that the syphilis I was seeing seemed much diminished in severity and I debated whether the cases were really fewer as well as lighter. This is not the place to argue the matter, but I state it as my opinion that there has been a decline in the severity of syphilis due to the wider prevalence of this disease—in other words, to an attenuation of the virus.

In Chart 9, again, is a chart that is worth attention. The steady and almost uniform decline is most remarkable and the cause is as plain as the results are striking. The decline in rheumatism is the direct result of the enormous improvement in the conditions under which the men work and sleep. Gone are the sailing vessels and small steamers with their drenched decks, hours of exposure on watch and the turning-in in cold, damp, unheated forecastles. The absence of work aloft and on deck on the steamers and their higher free-boards have radically changed the conditions on watch, and the living quarters are comparatively warm and dry.

Looking back at the bronchitis and pneumonia charts, it will be noticed that these diseases have somewhat increased, and it was stated in that connection that this was a surprise at first. On reflection, however, it appears that the reason for these increases is the same as that for the decline of rheumatism.

The sailor has been replaced by the fireman. He escapes the diseases associated with cold and exposure; he does not escape those due to sudden exposure when overheated.

THE PROPHYLAXIS AND TREATMENT OF GASTROENTERIC TOXEMIAS OF BOTTLE-FED INFANTS IN SUMMER

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One-third of all infants born into the world die before the third year, and the majority of these deaths can be attributed to gastroenteric toxemias of summer. About 85 per cent. of these deaths occur among bottle-fed infants.

In preventive medicine we encounter social as well as medical problems. The saving of the lives of infants from preventable disease is as much a social as it is a medical problem—so long as tenement builders are permitted to construct dwellings for human habitation without regard to provision for adequate systems of light or ventilation, and are allowed to fill them from basement to garret with men, women and children huddled together like sheep or cattle. So long as cities and municipalities permit the sale of unwholesome milk just so long will infant mortality be a stigma and a disgrace on our state and national life.

The saving of the lives of these infants is a greater problem than that of race suicide, and an infinitely more practical one, and as such demands the attention, not alone of medical men, but of public men, high in authority, who ought to be engaged, a portion of their time at least, in enacting laws safeguarding the lives of infants.

In the cities of Ohio, with but few exceptions, health officers are more concerned with the problem of unwholesome milk than with congested tenements, with their accompanying filth, squalor, foul air and poverty, since these latter conditions do not prevail to any extent.

Certified milk is fast coming to the rescue, and is the means, no doubt, of saving many lives, but its imperfect system of production and delivery and the higher cost often place it beyond the reach of the poor families who need it most. Moreover, it has other disadvantages; the babes who are fed on it are constipated and do not thrive; nor do they show the same rate of gain as do infants fed on less wholesome but fresher milk. These disadvantages are slight, however, when we consider the greater freedom from nutritional troubles which certified milk assures. In Akron a splendid plant is in operation for the production of certified milk, and the health board bacteriologist informs me that the bacterial count is as low as 7,000, while ordinary milk being sold in the city shows a count of 2,000,000. There has been some trouble with the delivery system. Some of the milk is 24 hours old when it reaches the consumer, and when kept for use another 24 hours, or 48 hours in all, it is entirely too old for infants during the hot months, unless we can be absolutely sure of its proper handling before and after delivery. I am informed that the bottles are to be stamped in the future, so that the consumer may know the age of the milk when received. This I consider a most vital matter.

Certified milk holds an important place in the reduction of infant mortality, but it cannot compare with reasonably clean milk fresh from the cow as a food for infants at any season of the year. Many cows are kept in the city of Akron and its immediate vicinity, and I have been advising families either to own a cow or to get milk from some neighbor's cow for the baby's use, instructing the mother in detail as to its proper care and preparation. I have yet to see a single case of infection from milk so obtained and cared for. It will be objected that there are only a comparatively few people who can obtain milk in this way, and this is true; but, on the other hand, there are many who could obtain such milk who are not now doing so chiefly because they are told that certified milk is the best obtainable for the baby, which is only true when fresh milk is not to be had. If certified milk for any reason is also out of the question, and ordinary milk must be relied on, then let it by all means be pasteurized during the excessively hot weather. Most of the objections to pasteurized milk are of but little consequence, since it need be done only for a period of three months; moreover, mothers can be taught to pasteurize milk by some simple home method.

At some future day we shall be able to procure wholesome milk at a moderate cost. The various milk commissions and health protective societies and organizations of like nature are carrying forward the work of education to such an extent that people are beginning to demand clean, wholesome milk, and the dairyman is coming to understand that unless he produces it he will be driven out of business by the stress of competition.

When the milk question is once solved, then the greatest of all factors in infant mortality shall have been conquered.

Mothers should be taught the great value of keeping the baby out of doors night and day during the hot months. This I consider next to clean milk in importance. The more fresh air the infant gets the better will be its digestion. I have repeatedly seen infants who were unable to digest properly any modified food mixture when kept indoors, go on to perfect digestion and assimilation on precisely the same modification when the tonic effect of fresh air was added by keeping the baby continually in the open air. Babies do not get fresh air enough, ill or well. "The catch cold fear" of most mothers is so firmly grounded that it will require generations to overcome it, but the fresh air camps, day nurseries and other fresh-air organizations are accomplishing much in the way of education, though much teaching yet remains to be done.

Heat is another factor in the production of gastroenteric disease—a temperature range of from 74 to 90 F. degrees being especially dangerous. I discovered that most of my cases of infection resulted from the 10 p. m. feeding, due, in my opinion, to two factors—the milk is older at this time and the nursery excessively hot. I found that during the hottest nights of last July the temperature of the average upstairs sleeping room was 10 degrees higher than the air on the downstair porches; for example, when the temperature was 81 F. in the nursery at 10 p. m. it was found to be but 71 on the downstair porches. To put a baby to bed in a room at 81 F. invites an attack of indigestion by heat depression and by raising the child's temperature to such an extent that the growth of pathogenic bacteria ever present in its alimentary canal are thereby favored, and when to this is added warm milk, 24 hours old or older, the conditions are most favorable for an attack. On the other hand, if the child is placed out of doors on a properly protected and screened porch to spend the night, with the temperature at 71 F., and gradually dropping, the factor of heat is eliminated, and the infant's digestion is assured by the stimulating and tonic effect of the fresh air, and therefore the danger of night infection is reduced to the minimum.

Over-feeding is best avoided by giving the baby an abundance of fresh boiled water to drink. The destruction of flies is important. Good serviceable screens are a good investment. Light clothing and frequent cool bathing are essential. Unceasing diligence in all hygienic matters is paramount in the prophylaxis of gastroenteric toxemia.

In the treatment of this infection a number of general principles are to be observed.

First, the withholding of all food for at least three days is imperative; after that time barley water may be given.

Second, the child should rest in bed out of doors. No child should be permitted to creep or to sit up even if apparently able to do so.

Third, the toxins should be eliminated by stomach washing, colonic irrigation and catharsis. As a rule these attacks assume such an alarming character at the onset that the physician is called in early, and there is no procedure so valuable as stomach washing, using boiled water at a temperature from 100 to 110 F., to which may be added a small quantity of lime water. Two drams of castor oil should be given through the tube before its withdrawal—a thorough colonic irrigation should follow, and after the stomach is settled cooled boiled water may be given freely by the mouth. This is all that is required in the majority of cases, and the child will be apparently well in three or four days. In cases seen a little later, stomach washing is not indicated unless that organ is irritable, but colonic irrigation should be done every four hours the first day of treatment—after that twice daily is usually sufficient. This should be followed by nutritive enemata at intervals of four hours. The rectal feeding should be continued until it is safe to begin feeding by mouth. If the rectum protrudes and becomes irritable, the application of a 5 per cent. ointment of cocain will be found efficacious. Calomel should follow the oil, but the less medication used the better. These infants are over-drugged, and thus the irritation is increased and prolonged, especially by calomel. Abt,[1] of Chicago, has recently shown by a "series of experiments the irritating effects of the common cathartics on the intestinal mucosa of infants. The benzidin test was used for blood. Calomel, magnesium sulphate and castor oil were the cathartics given. Both blood and mucus were shown in the stools after a few days. Calomel produced the greatest amount of irritation." When we consider how delicately the intestinal mucosa of an infant is constructed, it is well to be cautious in the administration of cathartics.

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[1] Archives Pediat., November, 1909; abstr. in The Journal A. M. A., July, 1909.

Fifth, of measures to control temperature and restlessness, a tub bath is the best. The child can be in the tub from ten to twenty minutes out of every two hours if necessary. An ice cap to the head is useful.

Sixth, the following measures may be used to allay the inflammation: In addition to rest in bed and after thorough cleansing of the alimentary canal, bismuth subnitrate may be given, from 1 to 2 drams daily, for a child one year old. Salol, 1 or 2 grains every three hours, is of some benefit as an intestinal antiseptic. Opium is indicated if there is much pain and continued frequent stools. It has been used too freely in the past and should not be given at all if cerebral symptoms and high temperature are present. Opium is useful in convalescence, when the taking of food is followed by a movement of bowels. In cases of a cholera infantum type with threatened collapse, it may be given hypodermatically in the form of morphin sulphate, 1/100 of a grain, with 1/1200 grain of atropin. This dose is suitable for a child of one year. For the prostration so often present, brandy should be administered by adding it to the boiled water, which the infant takes to allay thirst—½ oz. in 24 hours. Hypodermoclysis may be necessary in the graver cases. During convalescence tonics are indicated, and beef juice should be given freely. Organic iron in a liquid form to which is added Fowler's solution is a convenient method of administration. Lastly, removal to the country or seashore in those cases in which relapses are prone to occur will accomplish more than anything else in restoring the infant to health.

The use of antitoxin has not yet reached a practical basis in the treatment of gastroenteric disease of infants. I have, therefore, omitted its consideration in the preparation of this paper.

INJURY BY ELECTRICITY*

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In view of the widespread and increasing industrial use of electricity it is not surprising that electric trauma is on the increase and that cases thereof are being cited in medical publications. Despite this, authoritative information as to the physical effects of electricity is very scanty,[1] especially in American literature. In Germany (notably through the investigation of Jellinek[2]) and in France and Great Britain, there has been much preliminary experimentation and subsequent case reporting by physicians; but in this country investigation has been limited almost solely to electric engineers, and case reports have been few in number. This is my excuse for bringing the subject before the section as this paper aims to narrate what has been learned from personal observation and a very considerable search of the available literature.

TECHNICAL TERMS

For an intelligent understanding of the matter, it is necessary to know some of the usual technical terms, and they can be stated thus:

> The *volt* is the unit of pressure. The *ampere* is the unit of strength. The *ohm* is the unit of resistance. The *coulomb* is the unit of quantity.

But for all practical medical purposes it is enough to remember that volt is the unit to express pressure, intensity or electromotive force; and that the ampere denotes strength or current quality. The volt is the impelling force which moves the electricity through any conductor. The ohm is the unit of resistance and expresses that quality of the conductor which resists the passage of electricity through it.

Electricity flowing through any conductor is impelled by the voltage of the circuit and is opposed by the resistance of the conductor. The size of the current which flows is directly proportional to the voltage and inversely proportional to the resistance. This "size" is measured in amperes, the ampere being the unit of current, and its numerical value is found by dividing the volts by the ohms; ($A=V/O$; "Ohm's Law"). Ordinary conductors carry currents of three varieties: direct (or continuous); alternating; and interrupted.

The contact may be of four kinds, viz., *positive,* where the body is firmly and constantly pressed against the conductor; *partial,* where the contact is slight and steady; *brushing,* where the contact is slight and for a short interval, and *arcing,* where the current reaches the body via a vapor through which the current passes. The *intensity* may be (1) *low* (100 to 300 volts); (2) *medium* (400 to 600 volts); *high* (1000 volts and over); this classification being that adopted by Prevost and Batelli, of Geneva, as the outcome of many experiments.

The *duration of contact* may be (1) *short,* from one to five seconds; (2) *medium,* from five to eight seconds; and (3) *long,* from eight seconds upward.

Mode of receipt is generally by charged (1) wires or rails; (2) metal apparatus or tools; (3) flashes or arcs which are productive of burns only.

The average electric pressure in electric lighting is from 100 to 225 volts (direct), usually about 110 volts; in overhead and underground trolley systems from 500 to 600 volts (direct); suburban lighting circuits 1,000 to 2,000 volts (alternating); series arc lighting circuits 2,000 to 4,000 (direct or alternating); in overhead, long haul railway systems (as the N. Y., N. H. & H. R. R. Co.) 11,000 volts (alternating). In the third rail systems, like the local subway, the voltage is about 550 (direct). The highest voltage transmitted by wire in this country is that generated from Grand Rapids, Mich., 100,000 volts. Another system in Denver transmits 88,000 volts, and one in Los Angeles 75,000, and that from Niagara Falls 60,000.

A voltage of from 200 to 500 is usually not dangerous, but the alternating current is considered to be more dangerous than the direct. In the electrocution of criminals from 1,300 to 2,000 volts are used, the average being 1,700 of the alternating type.

FACTORS INFLUENCING PHYSICAL EFFECTS

The physical effects are mainly determined by the following:

1. Amount and duration of current.
2. Site, type and area of contact.
3. The individual.

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* Read before the Surgical Section of the New York Academy of Medicine, March, 1909.

[1] In addition to the subsequent numbered references the following may be consulted:
Batelli, F.: Rev. méd. de la Suisse romande, 1902.
Cleaves, M. A.: Ref. Handbook Med. Sc., iii, 742.
Crile and Macleod: Am. Jour. of Med. Sc., 1905, p. 417.
Cunningham, R. H.: New York Med. Jour., Oct. 21-28, 1899.
Jones, H. L.: Brit. Med. Jour., 1895, i, 468.
Lloyd, J. H.: Med News, Nov. 24, 1894.
Mills and Weisenburg: Univ. Pennsylvania Med. Bull., March and April, 1903.
Spitzka, E. A.: New York Med. Rec., Jan. 4, 1902; Proc. Am. Phil. Soc., 1908; Jour. Med. Soc. New Jersey, 1909.

[2] Jellinek, S.: Numerous articles in German medical journals.

Amount and duration of current is the main essential, and the greater the degree and the longer the duration, the greater the effect. High voltage, long duration and positive contact generally predicates coma, severe systemic shock, burns and oftentimes death. Medium intensity, with medium duration and partial contact, generally means burns of the second or lesser degree, less profound coma and shock with more or less paresthesia, especially numbness and tingling. Low intensity, with short duration and brushing contact generally means burns of the first degree or none, slight, if any, coma, and moderate paresthesia mainly of the tingling type. Low intensity, with brief duration and partial contact, generally means absence of burns or systemic symptoms, paresthesia of the formication type being generally alone complained of.

Amperage is so variable that it has not been mentioned because of its uncertainty, but the higher it is, the greater the effect in general.

Site, type and area of contact is less important, pursuant to the physical law that electricity takes the shortest route between two electrodes, and this has led to investigation to determine the resistance of various bodily elements to the transmission of electrical energy. It has been found that the tissues transmit proportionate to the amount of their fluid constituents; the more saline this is, the better the conductivity. Blood is the best conductor, mainly because of the saline serum. Muscle comes next, nerve tissue follows, and bone is a poor conductor. Similarly, experiments have shown that the bodily tissues exert varying resistance to the passage of electricity, as denoted by the unit of resistance, the ohm. The average human resistance is 1,000 ohms. Dry skin is very resistant, and one observer (Jolly) says that this is 150 times greater than that of the underlying tissues. A dry, hard, thick skin offers more resistance than one that is moist, soft or thin; an acid or alkaline perspiration reduces the resistance, while an oily skin raises the resisting power. If a strong alkali be applied to the skin so that the oily secretions are removed, the resistance is much lowered, so that the subject experiencing little effect from 100 volts might be disturbed by 10 volts. Larrat[3] says that if muscle is given a standard resistance of 1, then nerve and cartilage can be denoted by 2.5; bone as 15 to 20; and the skin and epidermis as between 100 and 500. Electric energy meets greater resistance passing transversely *to the axis of a tissue than* when [illegible] insmitted longitudinally, this being 6:1 in muscle, [illegible] in nerve fibers. Turner's experiments indicate that transmission *from hand to* hand *meets* with a resistance of 1,375 ohms; through one hand 900 ohms; from cheek to cheek 600 ohms; from one supramalleolar region to another 700 ohms; and through the calf of leg 350 ohms.

As compared with any metal, the body is a poor conductor, it being calculated that muscle is 115 million times a poorer conductor than copper. It has also been estimated that one inch of the sciatic nerve has eight times the resistance of the Atlantic cable.[4]

The greater the area of contact, the greater the effect, especially if the current traverses vital parts, notably if the heart is in circuit.

The individual variation means the personal equation, and it is strikingly similar to that of drug idiosyncrasy, notably as to sex, age, physique, occupation and temperament. Males are less affected than females; the aged offer less resistance than the young on account of the constituents of the blood vessels; those of rugged and muscular physique have a greater conductivity than those of the *opposite* type; the phlegmatic are subjectively less prone than the neurotic; those accustomed to electric energy are often less influenced than the novice. Illness, *sleep and alcholism render persons less* sensitive.[5]

Variations as to time of day, type of clothing, amount of food in the stomach and general well being, all seem to exert some influence; but the given effect cannot always be determined by these factors, and I have known electric workers to have practically no effects from contact under circumstances that left no doubt as to high voltage traversing the system.

PHYSICAL EFFECTS

In a general way these are three in number:

1. Death.
2. Burns.
3. Nervous symptoms.

Death.—Death from electricity is usually sudden, and is best represented by the execution of criminals, lightning stroke and unexpected contact with highly charged materials, the body completing and short-circuiting two conductors. Under such circumstances there may or may not be decided external evidence of what has occurred, any such taking the form of burns of varying degree, areas of lividity or ecchymosis, or simple crimsoning to mark the place of entrance or exit of the current. It is, however, very unusual for a lethal dose of electricity to fail to leave some visible evidence at the points of contact. Postmortem, such cases are surprisingly free from gross microscopic changes, and the most careful search of all the tissues has as yet failed to give any adequately uniform cause of death. The findings in general are not unlike those following drowning or suffocation. The body of Czolgos, assassin of President McKinley, was subjected to the most minute scrutiny, especially by Spitka's examination of the brain and cord, but nothing more than the customary fluidity and venous stasis of the blood with flaccidity of the heart muscle was found. In a still more recent autopsy of an electrocuted murderer the same negative findings were recorded. Observers appear to have two main theories to account for death under such circumstances; one being that the heart muscle is paralyzed by a tetanic spasm analagous to that observable in skeletal muscle under high voltage; and the other theory, that there is a definite cellular destruction, especially of the vital centers. In connection with this last, it has occurred to me that the disintegration that seemingly takes place may generate toxic materials, thus adding a chemical to a mechanical irritation that almost immediately kills. Death from low tension current is by heart fibrillation; heart and respiration alike fail from lethal medium tensions; and respiratory failure is the cause of death in high tension accidents.[6]

Burns.—Burns by electricity differ from those due to extremes of temperature only in origin, and they may be of the usual first, second and third degrees. An electric burn is an index of resistance of the tissue affected, and always indicates that the full strength of current has not been received. The character of the burn is sometimes determined by the type of metal acting as a conductor, and burns by arcs and flashes from copper conductors sometimes produce less severe burns than those emanating from iron or steel. By contrast with burns due to flame, or contact with steam, hot solids or liquids, deep electric burns are apparently less painful, produce less systemic shock, and heal more quickly. This was vividly impressed on me in a recent Harlem hospital service, where in adjacent beds lay patients who sustained irregularly distributed burns of all degrees in an incendiary fire, and also those who had received "third rail" burns; the former had more systemic symptoms, the burns were more intractable to treatment, and the complaints of pain were greater than in the latter class of cases. This is probably due to the fact that electric destruction of tissue is sudden and absolute, as if done by electric cautery. The contrast is even greater by comparison with burns from hot liquids, such as boiling water, oil or tar, and this irrespective of the surface areas involved. The resultant scarring and contraction appear about equal, even though electric burns are often more diffusely distributed over widely separated areas than burns of other kinds. If the clothing is ignited, there is added the element of heat burns to those which may be the direct result of electric contact. Examples of "third rail" burns are shown in the annexed illustrations (Figs. 1 and 2).

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[3] Electrothérapie: Quoted by awson Turner, Manual of Practical Medical Electricity, p. 18

[4] Beard and Rockwell, p. 168.

[5] Aspinwall, F. B.: Lancet, 1902, p. 660.

[6] Minot, L.: Des accidents causés par l'emploi industriel de l'électricité, etc., Paris, 1908, p. 21, quoting Prévost and Batelli.

Burns resulting from partial or arcing contact often heal slowly and show a tendency to slough or to become gangrenous, especially if the trophic supply be involved. Cases of this type sometimes give external signs disproportionate to the underlying damage, and the severer symptoms may be a few days in appearing, and then show as isolated or confluent areas of a more or less gangrenous type. From the time of receipt of burns of this kind to the outbreak of severer manifestations, the interval period is always filled by symptoms indicative of more or less deep seated damage, in addition to the superficial evidences.

REPORT OF CASES.

As chief surgeon of the Metropolitan and Interborough Railways I have had many opportunities to examine cases of electric injuries, and one of the worst of these was the following:

CASE 1.—*History.*—S., a laborer, was working in a manhole repairing the "channel rail" of one of the surface roads, the current of 550 volts being turned on. In some manner he fell against this charged rail so that his back contacted at about the lower scapular level, his feet being grounded on concrete.

Examination.—He remained in that position several minutes and when released was found to have a third degree burn that practically escharred his back from mid-scapular to the lower lumbar region, and it is said that the burn reached far enough to expose the underlying viscera. He suffered profoundly from shock and was unconscious, and his recovery was protracted. Even at this date (6 years later) there is an unhealed area about 3 by 4 inches in the central portion of the scar, but all except this space cicatrized without skin grafting in a remarkable way considering the original extent and severity of the wound.

Subsequent History.—Some years later he was seen and exhibited by me, and at that time he had a butterfly-shaped scar 13½ by 11 inches in the involved area, in the lower portion of which was a supposed lumbar hernia. The scar had contracted enough at first to almost draw the wings of his scapulæ together and spinal flexion was impossible; but by continued self-bending and manipulation of his back, he so far recovered as to be able to resume manual labor. Later he was operated on by me and the supposed lumbar hernia proved to be retracted bundles of muscle fiber. The above mentioned unhealed areas were covered by autogenous Thiersch grafts, but healing was not yet complete in January, 1910. He at no time developed a traumatic neurosis (Fig. 3).

CASE 2.—*History.*—Another severe case was that of D. H., aged 23, ironworker, born in Finland. He was working on an iron trestle repairing overhead wires of a suburban electric and steam railroad, and, while assuming an upright position, his left occipital and clavicular regions contacted with a wire bearing 11,000 volts, and he became temporarily unconscious. Through the courtesy of Dr. F. B. Littlewood he was seen with this physician ten days later at the New Rochelle Hospital, and at that time he was able to be out of bed for a portion of each day.

Examination.—He then presented numerous sloughing and granulating burns of the left upper extremity and chest, and an extensive third degree burn of the left occiput and of the soles of the feet. He had little if any systemic shock or sepsis. There was no nervous involvement organically or functionally. Mentally he was as apt as could be expected, considering the fact that about one-sixth of his body was more or less badly burned.

The duration of contact in this case could not be ascertained, but it must have been short and imperfect, as it is to be noted that the contact was on the head and the left upper extremity, and that he was grounded by his feet standing on a metal support so that the main part of his body was temporarily a part of the circuit. He wore no hat, and his shoulders were bared except for a thin shirt, and he had no tools in his hands. Theoretically this man should have been unable to withstand electric shock of that volume, but the burns evidenced the fact that only a portion of the voltage was received. I am told by Dr. Littlewood that he made an excellent recovery, and that his progress and subsequent symptoms were those typical of severe burns.

CASE 3.—*History.*—I am also indebted to Dr. Littlewood for notes of the case of J. M., who was working on the same railroad and who came in contact with a transformer so that his left shoulder apparently received 11,000 volts.

Examination.—He immediately became unconscious, and when seen at the New Rochelle Hospital by Dr. Littlewood, had severe burns of the entire left half of the body, and the sole of each foot showed two large blebs about the circumference of a dollar. His temperature ranged from 98 to 99.4, pulse 99 to 120, respirations 20 to 40. The next night he began to vomit, and developed an uncontrollable singultus. The vomitus became biliary, and assumed the type seen in gastroduodenitis following severe burns of this or other origin.

He died early on the fourth day apparently from systemic shock. In this case the manner and duration of contact was problematical, but it is stated that the contact was for an appreciable time and that he was probably grounded on metal judging from the blebs of the feet. It is to be noted that the respiratory rhythm was more disturbed than that of the heart, and that his temperature was at no time more than one-half degree below normal. Death in this instance was probably due to respiratory failure accompanied by paralysis of the diaphragm. No autopsy was permitted. The cause of the gastroduodenal symptoms in any class of severe burns has never been satisfactorily explained, and it is generally a bad feature.

NERVOUS SYMPTOMS

In the absence of direct destructive or inflammatory damage to nerve fiber and the subsequent development of a more or less localized neuritis, the nervous effects are almost invariably those of the hystero-neurasthenic type, it being rare in my experience to find either neurosis separately as a consequence of electric or any other form of trauma. I have never known an organic disease of the central nervous system to develop from the passage of electricity through the body, nor does the available literature narrate more than one instance of this nature. If a direct injury has been done to nerve fiber, the symptoms will be those corresponding to the distribution of the affected nerves, and hence no description is needed.

Where direct injury to nerve tissue is absent or minor in extent, the subsequent development of neurasthenic and hysterical symptoms is generally psychic in origin or dependent on auto- or hetero-suggestion, and the signs then presented are usually disproportionate to the actual physical damage sustained. Such cases rarely present objective evidences of electric contact and occur usually in those predisposed because of a neurotic or actually hysterical temperament. The flash or spark or arc from charged metallic contacted points occasionally induces this set of nervous symptoms, either with or without bodily contact. Cases of this and allied sorts are often designated by the term "electric shock," and less frequently as "electric neurosis;" but the symptoms do not differ in any essential respect from the ordinary shock or neurosis attributed to any other trauma.

Examination of such a patient develops a wealth of subjective symptoms and a poverty of objective symptoms, and the average case will correspond to the following:

Case 4.—*History.*—Mrs. F. was alighting, during a rain, from a suburban electric car operated by the overhead trolley system. While she had one foot on the car platform and the other on the metal step, her hand being on the dash handle, she claims to have received a "shock," the force of which threw her face downward to the ground. She was stunned but not unconscious, did not vomit, and when assisted to the adjacent sidewalk was able to discuss the occurrence with some show of agitation and not a little anger. She walked unaided to her home near by and saw her doctor some few hours later. He gave her lotions for the bruises of the knee, elbow and hands. There were no burns or obvious electric effects, but she did complain of tingling and needle sensations in the hand that touched the dash-handle and in the foot that contacted with the metal step.

Examination.—When I saw her some fourteen days after the accident she was abed, somewhat pallid, and had a characteristically tense and drawn expression, and was markedly irritable in manner and speech, all of the foregoing being said to be foreign to her normal state. There was an obvious rapid tremor of the closed eyelids, about the angles of the mouth, and of the outstretched fingers and protruded tongue. External evidences of injury were lacking aside from a fading area of bluish discoloration over a palm-sized area just above the right knee, probably from her fall. No evidences of electric contact, or of so called "electric shock" were apparent. No paralyses and no areas of diminished sensation; conjunctival and pharyngeal reflexes absent; marked demographia; knee-jerks lively, all others normal. Romberg sign marked; no Babinski, or allied manifestations. Gait was normal and pulse rapid. There were areas of shifting tenderness along the spine, these being very inconstant and readily brought out by suggestion. Two spots were found in the upper dorsal region consistently tender, but she leaned back in a chair on these same areas and made no complaint. There was no contraction of visual fields, and no color distortion. Here is a typical case of the milder form of recoverable hystero-neurasthenia, and she had many symptoms that might as well be stigmatic as symptomatic. She recovered perfectly in a short time.

Contrasted with the former mixed type of functional nervous disturbance, the following case of almost typical hysterical motor paralysis with milder neurasthenic symptoms is narrated:

Case 5.—*History.*—G., an electrician, was admitted to the Harlem Hospital in Dr. H. A. Haubold's service with a history of having been injured two weeks ago in an out-of-town power house, the patient stating that while holding a dead wire in his left hand, someone turned on the current of 110 volts and his hands and fingers were burned; immediately fingers of the left hand contracted; it felt as if an electric current passed through him every time his fingers were touched; he claims to have lost all sensation over entire left upper extremity; and says that he cannot move his fingers; he has had other electric burns, but was never affected in this manner before; the current entered the palm of the left hand, but the place of exit is unknown.

Examination.—On examination the left hand presented the pseudo-Dupuytren's contraction appearance indicated in the annexed photograph (Fig. 4), palmar flexion at the metacarpophalangeal joints of the inner four fingers being marked, that of the ring and little finger being most prominent. There was no apparent atrophy, nor was there any burn or other sign of trauma. He would not permit the slightest manipulation of the extremity except when his attention was diverted, and then the fingers could be partly extended. He claimed loss of thermal and tactile sensation over variable areas from the elbow down; but these shifted, especially on suggestion, and followed indefinite nerve distribution. Active motion of the wrist was limited; that of the elbow and shoulder normal. He would not permit passive motion, nor would he consent to electric tests. The examination as to his general state showed him to be in excellent condition except that he was of neurotic type and presented many hysterical stigmata and neurasthenic manifestations.

During the fortnight intervening between the accident and his entry to the hospital, he was under the care of a physician, who had given him some internal medication with local application of iodin, and who is said to have made a diagnosis of "paralysis from electric shock." At no time were splints or retentive forms of apparatus employed. He would not consent to the proposed anesthetization, nor would he allow a dorsal splint to be applied, and accordingly he was dismissed from the hospital with a diagnosis of "hysterical paralysis of hand." There was unquestionably an element of voluntary exaggeration in this instance as so often happens in that class of case in which litigation is pending. When seen a month later he had regained function enough to do his usual work but still had many subjective complaints.

Occasionally there are recorded cases in which blindness and deafness and other special sense defects have been attributed to electric contact or flashes, but all instances of this sort are of the hysterical variety, and fall into the class of so-called "fright neuroses." An example of this sort came to my notice recently in which "blindness" was said to have been induced in a susceptible woman by the flash and spark display when an overhead trolley wire was struck by a metal beam. She was seated in her room some two hundred feet away from the scene of this brilliant display of light and sparks but within sight and sound of the occurrence, and she claimed that she experienced the sensation of a ball of fire dancing before her eyes, and she immediately became sightless. Examination showed no organic defect of vision; the case was one of hysterical amaurosis induced by fright in a susceptible person. Vision returned within a short time.

OTHER EFFECTS

Crile[7] says that high tension currents produce no chemical change of importance in the various tissues and organs aside from the burning at the place of contact, and that the blood is unaltered. To prove this, a current of 2,300 volts (alternating) was passed through the head of an animal, and during the ensuing month of observation there was no discoverable loss of function. The same observer also says that when atropin is administered before the current is applied, the inhibitory effect is almost wholly obviated, except when the current passes through the heart muscle and then death ensues.

TREATMENT

Treatment presents no special problems, inasmuch as it is for the relief of shock, burns or neuroses. In cases of profound injury, and even where death has apparently occurred, prolonged artificial respiration should be maintained, as in drowning cases, with compression of the chest-wall in the precordial region; even digital compression of the heart itself has been proposed, but never successfully practiced. Crile recommends rhythmic pressure over the heart area, the tongue being drawn out, as he says that this combines circulatory and respiratory artificial stimulation.

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[7] Crile, G. W.: Article on Surgical Physiology, Keen's Surg., i, 79 *et seq.*; Crile and Dolley: Jour. Exper. Med., 1906, viii.

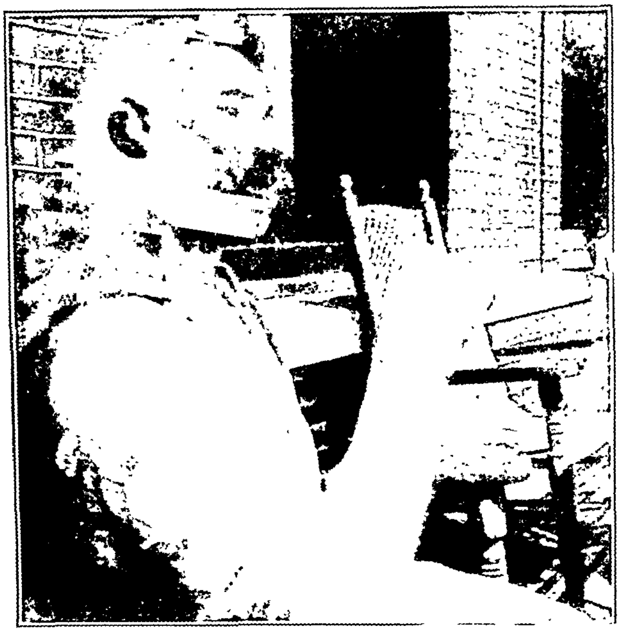

Fig. 1.—Example of third-rail burn.

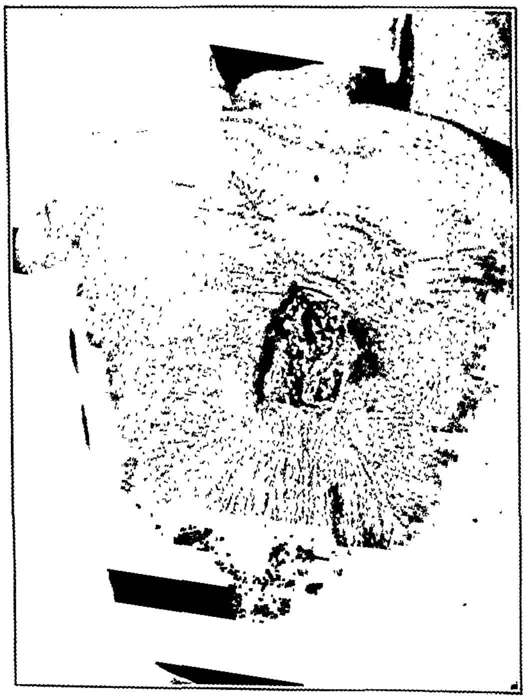

Fig. 3.—Third degree electric burn extending from mid-scapular to lower lumbar region.

With the foregoing manual methods, the use of various stimulants of the atropin, strychnin and adrenalin sort is also advisable.

Burns are treated in accordance with the custom of the individual physician, and it has been observed that the so-called open method of treatment is especially efficacious in this type of burn.

Neuroses are best treated by isolation, plus the mental or therapeutic means best liked by the individual practitioner.

PROGNOSIS

Prognosis depends on the extent of initial inhibition symptoms; in patients that survive forty-eight hours, the prognosis is that of the absorption of septic and toxic products from the burned areas, with the development of cardiac, respiratory or kidney complications, and with, occasionally, the presence of fatal gastro-intestinal disturbances.

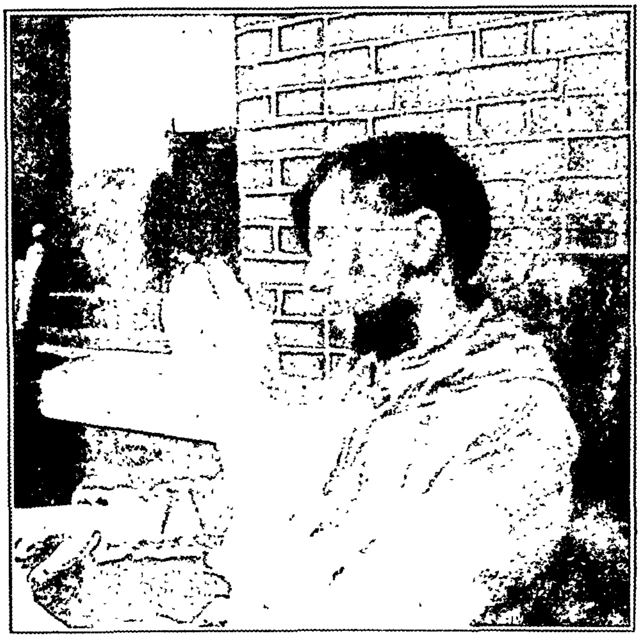

Fig 2.—Example of third-rail burn.

The ultimate scarring and contraction from the burns requires no comment. Neuroses do not ordinarily develop until after the patient has recovered from the main objective symptoms, and these nervous manifestations then frequently stand in relationship to a pending claim, and recovery does not usually ensue until adjustment is effected.

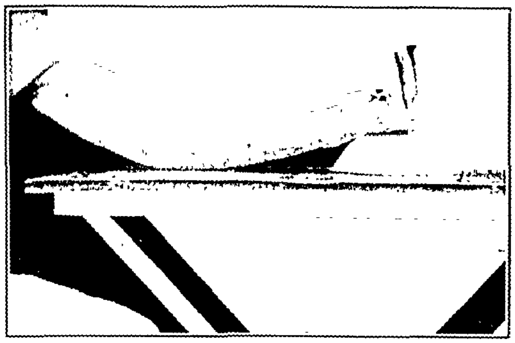

Fig. 4.—Pseudo-Dupuytren's contraction as the result of electric burn, showing marked palmar flexion at the metacarpo-phalangeal joints of the inner four fingers.

CONCLUSIONS

It can be stated that there is no special form of physical effect inherent to electricity inasmuch as every symptom can be paralleled by other forms of trauma. Likewise there is nothing pathognomonic in electric shock and the symptoms of it are those common to other forms of systemic shock, with or without burns or neuroses. The duration of symptoms is no more prolonged after electric than other forms of trauma; nor does there appear to be any sound basis for the claim that one electric shock renders the recipient more prone to similar experiences, but on the contrary an acquired immunity seems to be created by repeated applications. Electricity is well understood scientifically and is governed by well-known physical laws, and there is no good reason for the view often expressed that its effects on the human economy are unusual or peculiar.

101 Manhattan Avenue.

THE SURGERY OF THE HYPOPHYSIS FROM THE STANDPOINT OF THE RHINOLOGIST

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BALTIMORE

Heretofore rhinologists have been interested in the hypophysis only in a general way. Like others, they have been watching intently the results of the researches which are gradually unraveling the mystery enveloping the physiology of this gland, but up to the present time they have given but scant attention to the surgery of this structure. The explanation of the apparent lack of interest in the surgery of this region is to be sought in the fact that cases requiring operations on the pituitary body are never seen by rhinologists, and hence the nasal surgeon has never considered the hypophysis, although practically an extracranial structure, as being within the field of nasal surgery. Once the rhinologist's attention is directed to this region, however, he sees that he is in a position to help solve the problems of the surgery of this organ. The removal of the anterior wall of the sphenoid sinus through the nostril involves a technic with which the rhinologist has for years been entirely familiar. The anterior wall being removed, he has but to lengthen and to modify his instruments and he is in a position to attack the superior wall[1] separating the sinus from the sella turcica containing the pituitary body (Fig. 1).

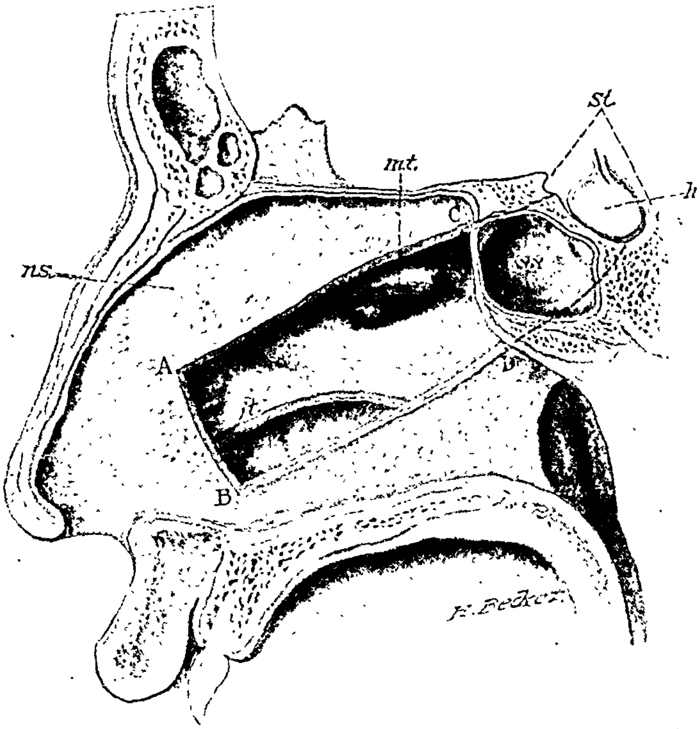

Fig. 1.—ABCD represents the window formed by resecting a quadrilateral piece from the nasal septum, N. S.; through this window the insertion of the removed middle turbinate is seen at M. T.; I. T., the remaining part of the inferior turbinate. AC and BD, continued by dotted lines, show the direction of approach through the sphenoid sinus, S. S., to the sella turcia S. T. containing the hypophysis, *H*. *For the sake of* clearness the anterior wall CD of the sphenoid sinus is shown, although in the operation it is removed before the nasal septum is attacked.

My interest was first awakened in this subject in February, 1909, through a case shown by Cushing before the Johns Hopkins Hospital Medical Society. In this case Cushing had successfully operated on the hypophysis by the supranasal method, that is through the superior part of the nose following a course parallel to the cribriform plate.

The methods of approach to the hypophysis, which had up to that time been suggested, were many, some more or less similar, and several were of a very mutilating character. Without attempting to describe in detail the difference between the various procedures, it may be noted that the methods may be classified according to Schloffer[2] as (1) *intracranial* and (2) *extracranial*.

1. Of the intracranial methods, aside from minor modifications, two entirely different procedures have been suggested:

A. *The approach through the temporal region of the skull*, lifting the temporosphenoidal lobe and thus reaching the hypophysis. This method, first suggested by Caton and Paul,[3] has been followed by Horsley[4] and McArthur.

B. The approach through the frontal bone, avoiding the frontal sinuses, lifting the frontal lobe and following the anterior fossa (Kiliani,[5] Krause[6]).

2. *The extracranial methods are those by which the* sella turcica is approached through the sphenoid sinuses, as, for example, by removal of the palate, and the interior of the nose (König[7]); or, as suggested by Kocher,[8] the superior maxilla is chiseled through above the alveolar process, and after incision of the soft parts a *Wangennasenlappen* is turned down and out; or after the nasal walls of the maxillary sinuses have been removed, through the fossa canina, Löwe[9] suggests making a skin incision along the nose which permits of a radical opening up of all the nasal sinuses by an anterior approach. Schloffer[10] in one case has turned the nose to one side, and, following a course parallel to the cribriform plate, after removing the turbinates and the nasal wall of the orbit, has succeeded in removing a tumor from the sella turcica. This method of Schloffer has been followed by Eiselsberg[11] in five cases and a similar operation has been done once in this country by Cushing.

It will be noticed that all of these operations are more or less extensive and necessitate great destruction of tissue.

Schüller[12] and Erdheim have pointed out the great value of the *x*-ray in aiding us to judge of the size of an hypophyseal tumor, and Schloffer's pathologic studies lead him to the conclusion that, so long as the cranial entrance to the sella turcica is enlarged to a diameter not greater than 2 cm., the tumor is operable by the transphenoidal route. Moreover, owing to the proximity of the carotids and the cavernous sinuses, the window which is resected from the sella turcica must necessarily be of small size, and hence all solid tumors operable by this route will be small. Large tumors of the pituitary region will probably all be inoperable.

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[1] In speaking of the part of the wall of the sphenoid sinus which separates the sinus from the sella turcica, as the superior wall, we follow the description of Zuckerkandl (Anatomie der Nasenhöhle, Edition 2, Vienna, 1893, i, 335).

[2] Schloffer: Beitr. z. klin. Chir., 1906, l, 767.

[3] Caton and Paul: Brit. Med. Jour., 1893, p. 1421.

[4] Horsley: Brit. Med. Jour., 1906, ii, 44.

[5] Kiliani: Ann. Surg., 1904, No. 40, p. 35.

[6] Krause: Die deutsche Klinik am Eingange des 20 Jahrhunderts, 1905, viii, 1004.

[7] König: Berl. klin. Wchnschr., 1900, No. 46, p. 1040.

[8] Kocher: Operationslehre, 1902, Edition 4, p. 133.

[9] Löwe: Zur Chirurgie der Nase, Berlin, 1905.

[10] Schloffer: Wien. klin. Wchnschr., 1907, No. 21, p. 621.

[11] Eiselsberg: Wien. klin. Wchnschr., 1909, No. 8, p. 287.

[12] Schüller: Die Schädelbasis im Röntgenbilde, Fortschr. a. d. Geb. d. Röntgenstr., Ergänzungsband 11.

Considering, then, the fact that perhaps all operable tumors of this region will be small, it occurred to me that a conservative surgical method following a transnasal route diagonally through the nose roughly parallel to Zuckerkandl's line from the nostril to the sphenoid sinus ought to accomplish the same result as the more radical procedures. The following facts support this conclusion:

1. Adrenalin, owing to its constricting effect on the cavernous tissue of the nose, renders the nasal passages so patent that, in most cases, the anterior walls of the sphenoid sinuses can be clearly seen over a considerable area by inspection through the nostril. This being the case it would seem rational to follow this open route from the nostril through the sphenoid cavity, and by thus utilizing the space offered by the natural passages through the nose one is enabled to open the sella turcica with the *least possible destruction of tissue.*

2. Without entering into the question of the physiology of the hypophysis, it will suffice to say that the researches of Howell[13] and of Schäffer[14] have shown that this organ has a definite physiologic function, and, while the experiments of Friedman and Maass[15] have apparently shown that in cats the pituitary body can, without injury to the animal, be removed, on the other hand, Paulesco[16] and also Cushing[17] have demonstrated that in dogs part at least of the anterior lobe is necessary to the life of the animal. The results of animal experiments cannot always be applied unchanged to human beings, and, besides, the complete extirpation of the hypophysis has apparently in man been accomplished in several cases without a fatal result. With the evidence at hand, however, the question of partial removal comes up at once. A glance at Figure 1 will show that this infranasal route, anatomically considered, would seem to be advantageous particularly for partial removal, for in this case the hypophysis is approached from below, making it easier to remove the posterior lobe than if the supranasal route parallel to the cribriform plate be followed.

3. The nasal surgeon, as mentioned above, had already developed the technic of this operation to the point of opening up the sphenoid sinuses, and it would seem but an easy and natural step to cross the sphenoid cavity and attack the sella turcica.

4. While in conditions demanding operation on the hypophysis the question of the cosmetic result is of minor importance, still, other things being equal, the procedure causing the least disfigurement should be the method of choice. In some of Eiselsberg's cases healing was accompanied by marked deformity. This infranasal method should be followed by no deformity at all.

With these facts clearly in mind I began on fresh cadavers to develop a technical method for this operation, which up to that time had not been suggested. In one of my early experiments, after resection of the middle turbinate, part of the inferior turbinate and the anterior wall of the sphenoid sinus of *one nasal cavity* alone, it was possible to remove the pituitary gland through the nostril without cutting the ala and with the nasal septum intact. This case represents, of course, unusually favorable conditions, and in my other experiments it was always necessary to remove part of the nasal septum, including the septum sphenoidale. Later as routine I began removing both middle turbinates, for this shortens the operation considerably. I followed in each case the general course here described, that is, in the direction of Zuckerkandl's line through the sphenoid sinus to the sella turcica. As each new difficulty arose I have tried to devise instruments to overcome it. Meanwhile Kanavel[18] of Chicago published an article describing a method of approach similar to that which I had been following. He is more radical, however, and advocates elevating the nose. I have developed the technic further than Kanavel has done, and am describing the procedure as I have developed it.

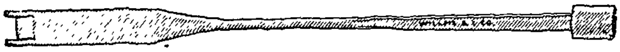

Fig. 2.—Chisel with knobs at either corner of the cutting edge used in removing the quadrilateral piece from the nasal septum. These knobs straddle the septum and prevent the chisel from slipping into the nasal cavity.

In the first place I suggest with Moskowicz[19] that the operation be done in two stages. I believe, however, the turbinates of both nasal cavities, the anterior wall of the sphenoid sinuses, part of the nasal septum, including the septum sphenoidale, can in most cases be removed at a preliminary operation with *local anesthesia* (cocain, adrenalin) without slitting the ala nasi at all. It will probably be a question entirely of the patient's tolerance for cocain and adrenalin; and it is suggested that in the cocainization particular attention be given to the regions of the foramina through which the nerves enter the nose, that is, the ethmoid and the sphenopalatine foramina. By observing this precaution one should be able to produce the necessary anesthesia with the minimum amount of cocain. This preliminary operation will technically always be best carried out, I am inclined to think, if done by the nasal surgeon.

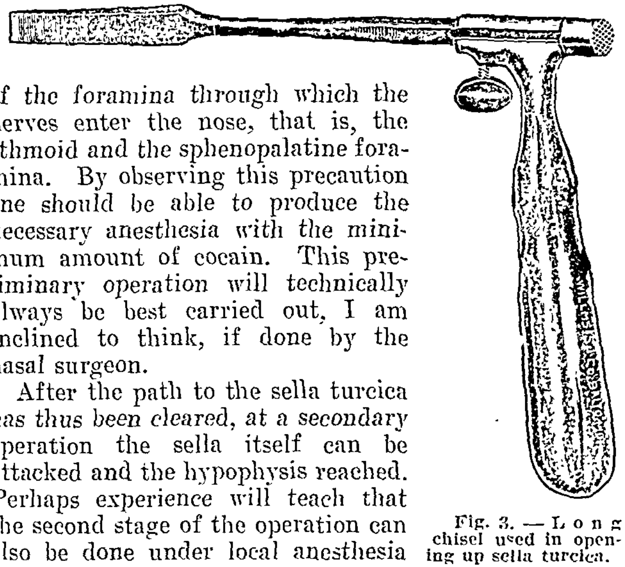

Fig. 3. — Long chisel used in opening up sella turcica.

After the path to the sella turcica has thus been cleared, at a secondary operation the sella itself can be attacked and the hypophysis reached. Perhaps experience will teach that the second stage of the operation can also be done under local anesthesia with cocain. Indeed, it may be shown in practice that it is possible, in some cases at least, to do the complete operation, that is both stages, as here suggested, with local anesthesia at a single sitting. For the second stage I recommend slitting the ala, although I have not found it necessary in any of my experiments on cadavers. Whether this second stage of

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13. Howell: Jour. Expér. Med., 1898, iii, 245.

14. Schäffer and Vincent: Jour. Physiol., 1899, xxv, 87; Schäffer and Herring: Philos. Tr. Roy. Soc., London, 1906, 199, B 1.

15. Friedmann and Maass: Berl. klin. Wchnschr., 1900, No. 52; Friedmann: Berl. klin. Wchnschr., 1902, No. 19, p. 436.

16. Paulesco: Compt. rend. d. acad. Sc., 1907, cxliv, 521.

17. Cushing, H.: Some Principles of Cerebral Surgery, The Journal A. M. A., Jan. 16, 1909, lii, 184.

18. Kanavel, A. B.: The Removal of Tumors of the Pituitary Body by an Infranasal Route, The Journal A. M. A., Nov. 20, 1909, liii, 1704.

19. Moskowicz: Wien. klin. Wchnschr., 1907, p. 792.

the operation should come within the field of the nasal or the brain surgeon remains for the future to decide.

The technic in detail is the following:

1. The middle and as much as is necessary of the inferior turbinate of one nasal cavity are removed to permit a clear view of the anterior wall of the sphenoid sinus. The anterior wall of the sinus is then removed. The instruments used are familiar to all nasal surgeons and need no special description.

2. This procedure is repeated in the opposite nasal cavity, reserving the septum to be attacked later. The partial resection of the nasal septum is postponed until after the removal of the turbinates of both nasal cavities, on account of the hemorrhage often met during operations on the vomer.

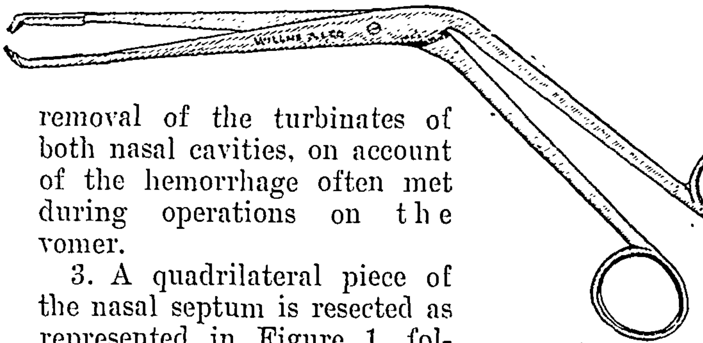


Fig. 4.—A long forceps with teeth set at an angle, used in removing pieces of bone from the sella turcica.

3. A quadrilateral piece of the nasal septum is resected as represented in Figure 1, following roughly Zuckerkandl's line in the direction of the rostrum sphenoidale. After this the septum sphenoidale is removed.

In attacking the nasal septum it is advantageous to begin by making an incision with a knife along the line A B (Fig. 1), then with a chisel (Fig. 2) cut, following the line A C to the sphenoid. Continuing with the chisel make a similar cut along the line B D, parallel to A C. This quadrilateral section of the septum is now removed in one piece, using for this purpose the Jansen forceps designed for the submucous resection of the nasal septum. The chisel (Fig. 2) used on the nasal septum is provided with knobs at either corner of the cutting edge which prevent it from slipping into the nasal cavity as it glides along the septum. (In cases of marked deviation of the septum this structure is then, of course, attacked as the second step of the operation.)

4. The septum sphenoidale is now removed partly with a long chisel (Fig. 3) and partly with a Grünwald nasal forceps. In practice it may be found to be helpful to note accurately the position of the sphenoidal septum with reference to the median line, and then to leave a slight ridge of septal bone to act as a guide to the midline at the secondary operation.

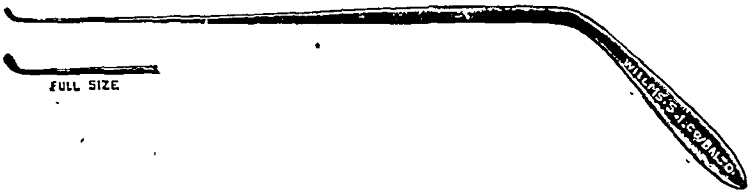


Fig. 5.—An extra long sound made of tempered steel which is often used to advantage.

5. The sella turcica is now opened up with the chisel (Fig. 3), the splinters of the bone being removed with the toothed forceps (Fig. 4). A long sound (Fig. 5) is often used to advantage.

In carrying out this fifth step, that is, the second stage of the operation as here proposed, the importance of keeping in the mid-line so as to avoid the optic nerves and the carotids cannot be too strongly emphasized.

It should be noted that Crowe's work showing the inhibitory effect of hexamethylenamin on infections of the meninges will make the rhinologist bolder in opening up the cranium from the nose.

To develop the technic for this operation, I have experimented on eleven cadavers. Owing, however, to the uncertainty of autopsy material and to the delays incident on devising and modifying instruments, the work (begun early in June, 1909) has extended over a period of six months.

For illumination of the field of operation I have used an ordinary gas-jet and a head-mirror such as belongs to the routine equipment of the nasal surgeon. A dilating speculum with an electric lamp attached at the distal end might be of assistance to surgeons who are not familiar with intranasal technic.

In suggesting that such an extensive intranasal operation be attempted under local anesthesia, one cannot but feel grateful to two men whose work has made possible, in the large majority of cases at least, both painless and bloodless nasal surgery. I refer to Koller, who first made use of cocain as an anesthetic, and to J. J. Abel, whose researches stimulated the work which culminated in the making of the adrenalin preparations as now used in practice.

Finally, I am much indebted to Dr. Whipple, of the pathological department of the Johns Hopkins Hospital, who kindly furnished the material for these experiments, and I desire also to express my appreciation of the assistance of Dr. Parsons and Dr. Brülle.

SUMMARY

In a word, this method is conservative and consists in approaching the sella turcica from below, following a course diagonally through the nose from the nostril to the sphenoid sinus, removing as much as is necessary of the turbinates, the entire anterior walls of the sphenoid sinuses, a quadrilateral piece from the nasal septum, including the septum sphenoidale, and finally attacking the sella. This procedure takes advantage of the natural space afforded by the nasal passages, and thus permits the sella turcica to be opened up with the *least possible destruction of tissue*. Further, I believe that the greater part of this operation can be done under *local anesthesia*.

227 West Monument Street.

A NEW APPARATUS FOR PROCTOCLYSIS

ANGUS McLEAN, M.D.
DETROIT

This apparatus consists of a galvanized iron or tin box (size 7 by 8 by 9 inches), the walls, floor and cover of which are made of two layers, between which is placed a sheet of asbestos to minimize heat radiation. For the front, two layers of glass instead of metal are used.

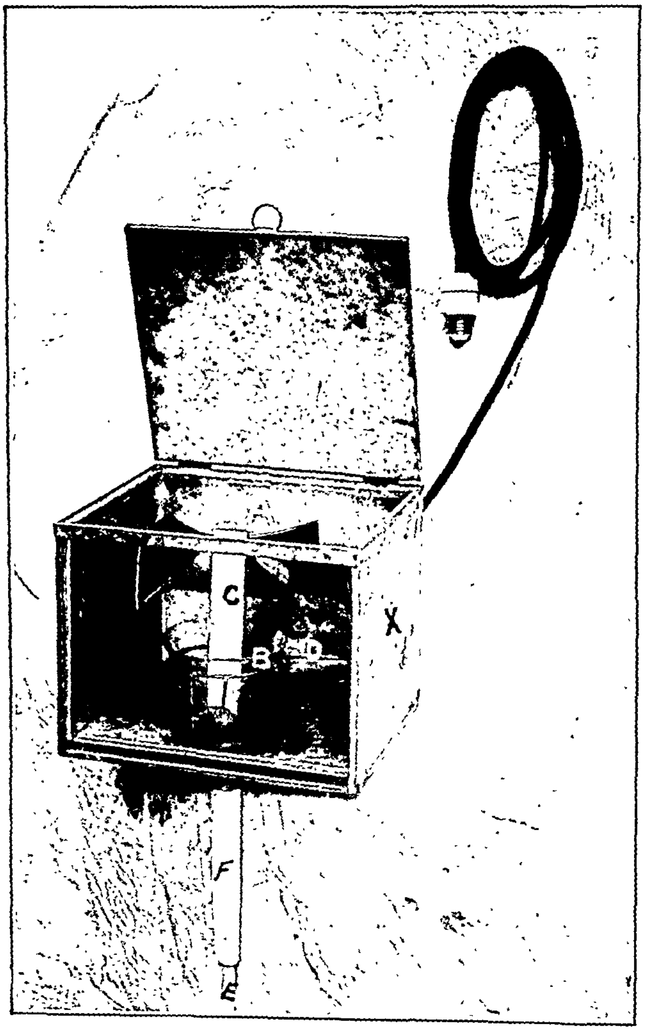
In this box are placed a two-quart dish (A), a funnel (B), a strip of gauze (C) and an incandescent bulb (D).

A. The two-quart dish is for the saline solution. The peculiar shape seen in the illustration is used to economize space. It is made as broad and as shallow as possible to insure a uniform drop.

B. The funnel receives the saline solution drop by drop and is connected with a tube (E) which leads to the patient's rectum. The tube leading to the rectum is enclosed in one (F) of larger caliber. This is attached to the floor of the box, but does not communicate with its interior. The purpose of tube F is to prevent radiation of heat from the inner tube, thereby conserving the heat in the saline fluid during transit from the container to the rectum.

C. The gauze hangs over a spout on the dish, and by capillary attraction causes the saline solution to flow drop by drop into the funnel and thence into the rectum. It is so arranged that the distal end hangs about 2 inches below the lowest level of the dish. A strip is used 1 inch wide and of varying thickness, depending on the number of drops per minute required (four-ply giving 50 drops a minute).

D. An incandescent bulb (or, if electricity is not at hand, an alcohol lamp) is placed under the dish and as near as possible to the double glass front in order to prevent condensation of vapor. A sixteen-candle-power bulb is sufficient. This will keep the temperature of the saline solution at 140 to 145 F. indefinitely. This temperature I have found necessary to cause the solution to enter the rectum at a temperature of 100 to 101 F., for, in spite of the double tube and the drop falling through air heated to 140 F. the loss of heat from the dish to rectum, through a tube 4 to 5 feet long, is about 40 degrees. Were the smaller tube not enclosed by a tube of larger caliber the water would enter the rectum at about 96 F., and the slightest draught coming in contact with the single tube would bring the temperature of the fluid entering the rectum still lower (to 85 and 80 F.).



A new apparatus for proctoclysis; A, dish for saline solution; B, funnel which receives the solution drop by drop; C, gauze hanging from spout of dish A, and conducting solution into funnel B; D, electric bulb; E, tube leading to rectum; F, larger tube enclosing tube E.

From this description it is evident that no part of the tube is constricted and that consequently there is always a free communication between the rectum and funnel. The drop is formed outside of this communication. Should feces, pressure of the thighs on the tube or anything else cause an obstruction to the flow into the rectum, the solution will at once be seen filling the funnel. Gas forming in the rectum, having absolutely nothing to obstruct its passage outward, will readily bubble up through the tube. The box itself is so arranged that the funnel will be from 8 to 12 inches above the level of the patient's rectum. In case the rate of absorption is slower than the rate at which the solution is dropping, the tube will naturally become filled with water. Even then, gas that may accumulate in the rectum, being much lighter than water, will easily bubble up through the tube. The amount of pressure necessary to bring about this result is that equal to 30 mm. of mercury, and pressure to that extent any patient can conveniently bear. Again, if the rate of absorption is slower than the rate at which the fluid is dropping into the funnel, say, 60 drops per minute, the fluid is running too fast for the individual. The rate of flow can then be diminished by simply using a strip of gauze with a lesser number of thicknesses. This will prevent the tube filling with water and consequently a pressure equal to 30 mm. of mercury, necessary to force gas through a column of water in the tube, will never exist. Gas will simply find its way through the patent, empty tube as soon as it is formed or, if it has been formed higher up in the colon, as soon as it reaches the rectum.

For the rectal end of the tube, the rectal tips advocated by Murphy are used.

This apparatus, therefore, furnishes a perfect drop which can easily be regulated to suit the needs of the patient. It allows for rapid expulsion of flatus. It is simple and very inexpensive (any tinsmith can make an outfit), and, if necessary, it can quickly be improvised in any household where a basin, a funnel, a tube and a piece of gauze are at hand.

57 West Fort Street.

A CASE OF HEMORRHAGIC PEMPHIGUS

CHARLES F. CLOWE, M.D.
SCHENECTADY, N. Y.

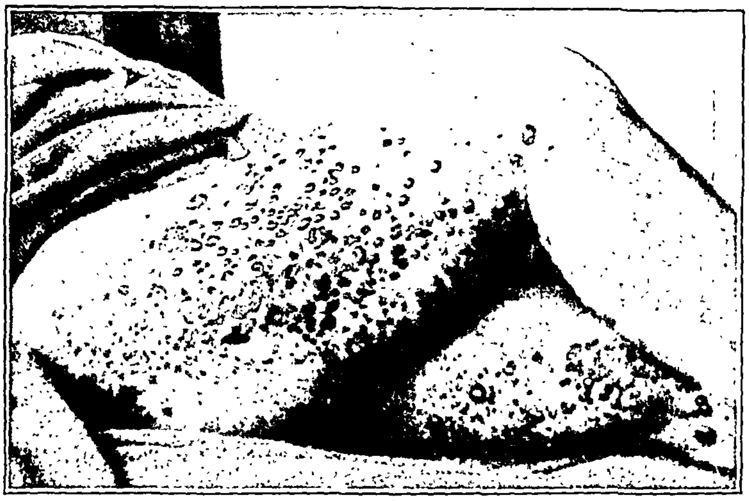
A case of pemphigus is rare enough to attract attention at any time, but a case of this degree of severity is so unusual as to merit reporting.

Patient.—J. McC., aged 29, driver of an ice wagon, a blonde, weighing 325 pounds, was admitted to my ward in the Ellis Hospital, Oct. 14, 1909, with the following history.

History.—His father died of tuberculosis at the age of 61. His mother, two sisters and a brother are alive and well. The patient had the usual diseases of childhood, pneumonia at 14, and gonorrhea at 22, of which latter he was "cured" in about six weeks. For the past two or three years he has had indefinite pains attributed to rheumatism. There is no evidence of syphilis. He is an excessive user of tobacco and at times drank heavily of both beer and whisky. For the past two years he has drank steadily, chiefly of beer. He suffers more or less from indigestion. His bowels move normally.

Present Illness.—Early in August, 1909, the patient noticed some blisters on the skin of the thighs and pubic region which itched somewhat. These dried and new ones came for the next three or four weeks, during which time he kept at work and felt fairly well, although he visited a physician and applied local treatment. During the month of September the eruption steadily increased and his strength and appetite failed, until about October 1, when he was obliged to give up work.

Examination.—He is an extremely large man. His body is almost covered with a bullous eruption, the blebs varying in size from a pea to the area of a half dollar. The eruption is most profuse on the thighs, in the axillæ, over the abdomen and neck. No part is free except the palms of the hands and soles of the feet. The blisters are seated on a slightly reddened base and filled with a clear serum. Many of them are tinged with blood. The character of the eruption is well shown in the accompanying illustration. His tongue is coated, there is complete anorexia, bowels are regular. He is delirious during the night and at times during the day, is hard to manage and vile in his language. His pulse was always relatively high and of poor quality. Tobacco and alcohol were both stopped on admission. A blood count showed whites 7,200, reds 4,320,000. On examination the serum in the blisters was found sterile.



Hemorrhagic pemphigus.

Treatment and Course.—The blebs were punctured, the fluid expressed and a dressing of very soft oxid of zinc ointment applied. He was given 5 m. of Fowler's solution and ½ ounce of linseed oil three times daily. The patient steadily improved and in about two weeks the eruption had entirely disappeared with no loss of tissue, and only a bright red stain remained. During this time, however, he developed a marked paresis of the extensors of the arms and legs accompanied by no pain, but a general muscular soreness. This gradually has cleared up under the use of strychnin and electricity until at this writing (Dec. 15, 1909), he is in very good condition.

613 Union Street.

A NEW APPARATUS FOR THE ESTIMATION OF BLOOD-PRESSURE

DELNO E. KERCHER, M.D.
PHILADELPHIA

The apparatus for the estimation of blood-pressure which I desire to present has the following features to recommend it:

Extreme simplicity; the avoidance of all ground joints, cocks, valves and complicated mechanisms.

Absence of metal parts to amalgamate the mercury.

Ease of manipulation; only one hand being required to work the apparatus, the other being free to feel the pulse or manipulate the stethoscope in auscultation.

Cheapness; there being no expensive parts or construction, this apparatus can be sold for one-half the price of the cheapest instrument at present on the market.

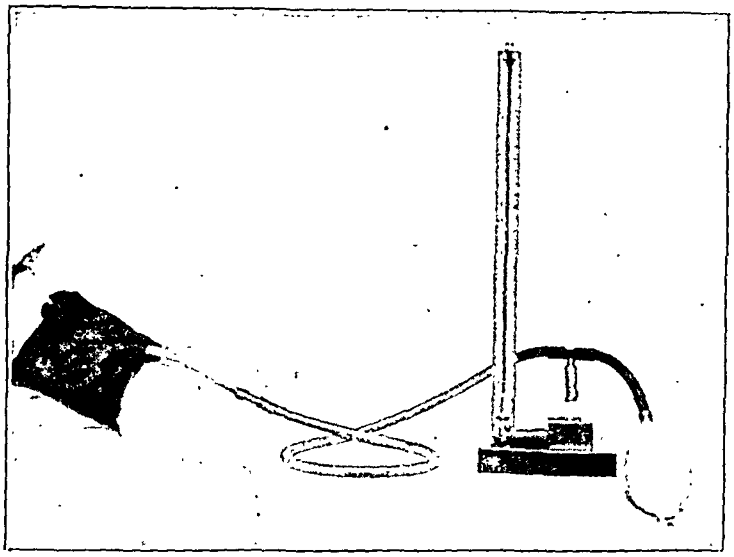
Portability; it may be taken apart readily, carried in any convenient bag and quickly put together again for use. The entire apparatus weighs fourteen ounces.

This apparatus consists of:

1. Wooden base with supports for small glass mercury cistern and for upright 300 mm. scale graduated in millimeters. Lying in a groove in this scale is the glass tube containing the mercury column which measures the pressure.

2. A strong cloth cuff 4 by 36 inches, containing the rubber pneumatic tube.

3. Three feet of strong rubber tubing bearing at one end a slip connection for attachment to the pneumatic cuff, at the other a rubber bulb with double valve for applying the air pressure to the apparatus, and in the tubing about six inches from the bulb a T connection to attach the cuff and bulb to the mercury cistern.



Apparatus for estimation of blood-pressure.

4. One ounce of pure mercury.

1534 Pine Street.

COMBINED MOUTH GAG AND TONGUE FIXER AND SUCTION APPARATUS FOR TONSIL OPERATION

EDWARD C. SEWALL, M.D.
SAN FRANCISCO

An efficient mouth gag and tongue depressor which I have been using for over six years is shown in the accompanying illustration (Fig. 1). It is modeled on the style of the old Hartman mouth gag, but involves an entirely new principle, in that it has a spatula so curved that it fits over the dorsum of the tongue, reaching the base of the epiglottis. By the employment of force from behind forward the base of the tongue is pulled away from the pharyngeal wall and fixed there. This allows free breathing space for the patient, and also puts the pillars of the fauces on the stretch so that their separation from the tonsil is much facilitated.

Figure 2 represents an apparatus devised by myself and Dr. F. A. Hamlin which adds very materially to the safety and ease of doing a tonsil operation. It consists of a large bottle in which a partial vacuum is produced by means of a water suction pump. A column of mercury registers the "negative pressure." A tube is attached which is sterilizable and can be passed easily through the mouth or nose into the throat. The pump used is of large size and fits on an ordinary faucet. The bottle exhausts quickly and, being of large size, retains its efficiency for a considerable period. This apparatus can be set up in any operating room at nominal cost.

A little experience in the use of the gag and tongue fixer is important, and a few words are pertinent as to the method employed in the Cooper College Clinic, where the apparatus has been developed.

The gag and tongue fixer is used usually with a general anesthetic, no gag being necessary where local anesthesia is employed. The patient invariably is given ether with the Allison inhaler, usually preceded by nitrous oxid. The recumbent position with overhanging head is employed. When the patient is anesthetized, a tube is passed through the nose and the ether given by the Bottsford-Junker apparatus. This usually produces some irritation, accumulation of mucus and coughing. It is here that the gag is of use. Such accumulation of mucus in the throat of anesthetized patients, especially where ether is used, is a source of danger. On introducing the gag and tongue fixer the breathing is immediately free except for the presence of the mucus, and this is then easily removed by slipping the tube of the suction apparatus into the throat. Such a method is recommended whenever in giving an anesthetic for any purpose there is liability of aspirating mucus. It is more efficient and in all ways preferable to the unsatisfactory method of wiping out the throat.

In the introduction of the gag, on account of the curve of the tongue fixer, it is sometimes necessary to bend the head backward in order to get it over the tongue. The blade is adjustable and should reach to the epiglottis. The mouth is then opened by pressing the thumb piece and held by the ratchet. The part of the ring resting on the teeth is so bent that it is suitable for infant or adult mouths. One point of great importance in the use of the gag is that the handle be raised by the anesthetist so that the gag fulfill its object, i. e., the bringing forward of the base of the tongue.

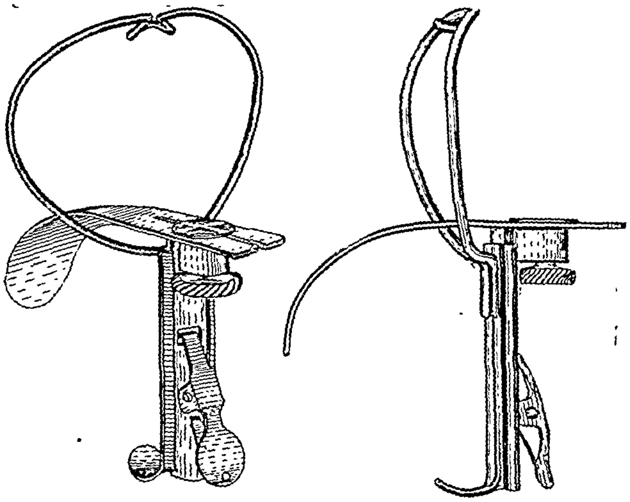


Fig. 1.—Combined mouth gag and tongue fixer.

The mouth is now open, the tongue fixed away from the field of operation, the breathing is undisturbed and there is no possibility of aspiration of mucus or blood. The overhanging head allows all the latter to flow toward the nasopharynx, where it is quickly aspirated by the suction apparatus. The pillars are drawn taut and the fold of the anterior pillar running to the base of the tongue engages the separating knife readily. The tonsils are removed in their entirety.

I wish to recommend the gag and tongue fixer especially in relation to the hemorrhage that may occur in tonsil operations. It must be admitted that, though the tonsil with its capsule is removed, leaving the superior constrictor bare, this does not do away with all danger of hemorrhage. Where hemorrhage occurs after the patient has recovered from the anesthetic, the usual means of stopping it are first employed. If these fail, the gag and aspirator make it possible to again fix the parts and clean the field. Where readministration of an anesthetic is for some reason undesirable, the patient may be held by force and the gag introduced. He has no control over his tongue or throat, no matter how he may gag or struggle, and any vomitus which may appear is aspirated.

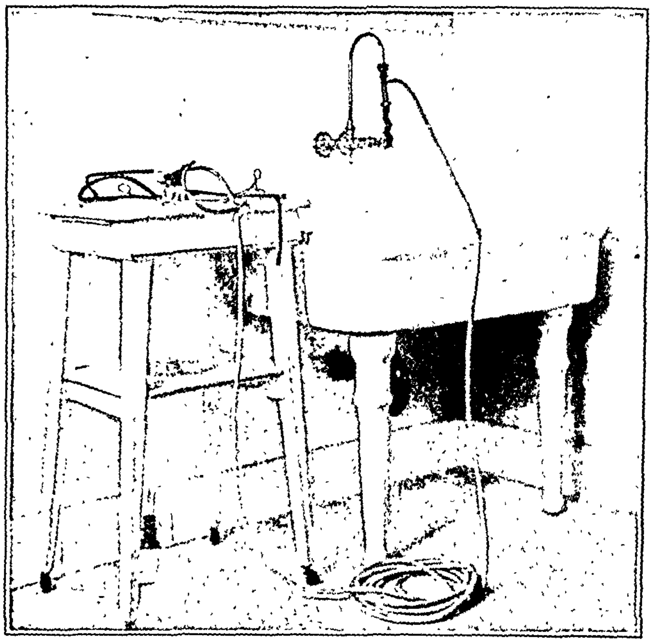


Fig. 2.—Suction apparatus used in tonsil operations.

The amount of blood lost in this operation by children especially is important. For that reason the bottle has been graduated in ounces and thus the exact amount of blood lost can be measured. If any simple antiseptic solution is used in cleansing the tube the amount of this is deducted from the total amount of fluid in the bottle.

This gag and tongue fixer is manufactured by H. Weniger, 244 Ash Avenue, San Francisco.

135 Stockton Street.

EPIDERMIDOLYSIS BULLOSA CONGENITA

(EPIDERMOLYSIS BULLOSA HEREDITARIA OF KÖBNER)

J. PHILLIP KANOKY, M.D.
AND
RICHARD L. SUTTON, M.D.
KANSAS CITY, MO.

Since Tilbury Fox,[1] in 1879, described two cases of "congenital ulceration of the skin, with pemphigus eruption and the arrest of development generally," and Goldscheider,[2] in 1882, reported his peculiar example of "acantholysis," about 100 cases of the novel affection from which their patients suffered have been placed on record. In addition to these, we desire to report the clinical history and the laboratory findings in a case of

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1. Fox, Tilbury: Lancet, London, 1879, i, 766.
2. Goldscheider: Monatsh. f. prakt. Dermat., No. 6, 1882.

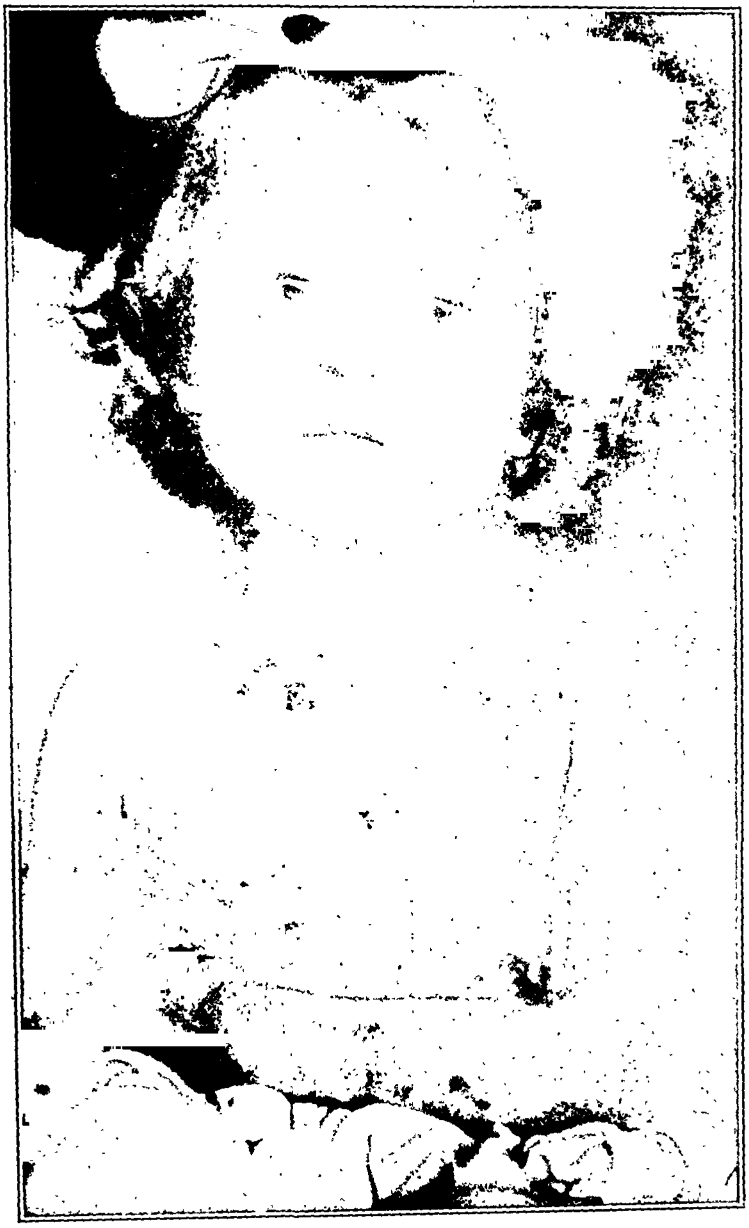

Fig. 1.—Showing ruptured and disappearing bullæ on trunk and arms.

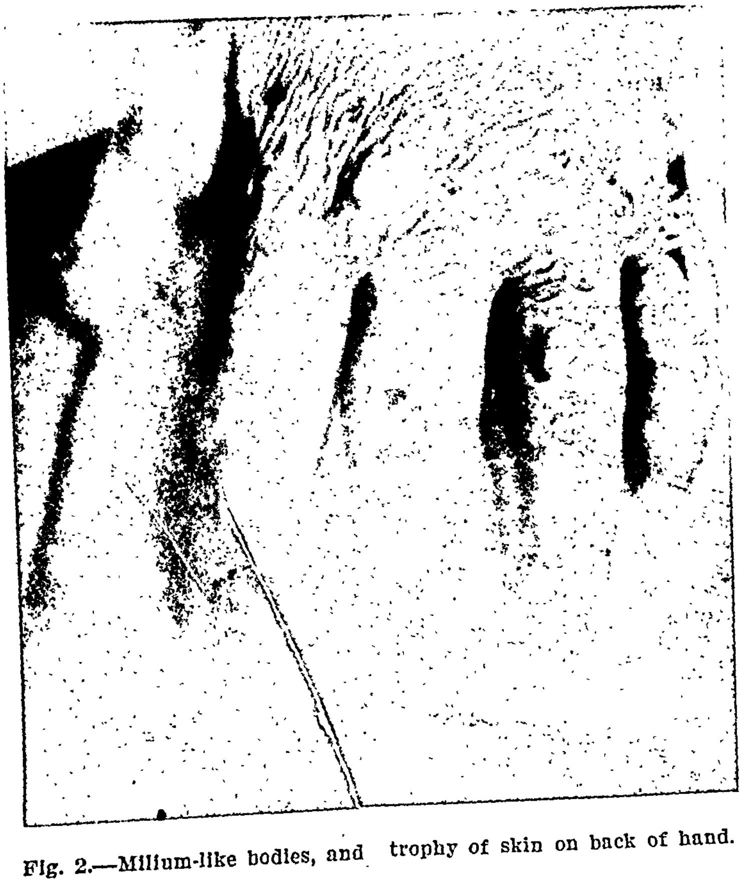

Fig. 2.—Milium-like bodies, and trophy of skin on back of hand.

epidermidolysis bullosa which has been under our care during the past five months.

Patient.—M. W., female, aged 3 years.

Family History.—The father is a farmer by occupation, and a strong, healthy man of 26. The mother is 22, has always enjoyed good health, and has never had a miscarriage. There is one other child, a boy, aged 5. His health is excellent. The cutaneous history of the family is negative. No other member has ever been affected with a similar disorder so far as the grandparents remember.

Personal History.—The patient has never experienced any illness other than the one for which relief is now sought. She was a nine-months baby, and the delivery was uncomplicated. At birth the skin and nails were apparently like those of any other child. The mother's health during the period of gestation was good.

Present Illness.—When the patient was two days old a large bulla appeared on the outer side of the left leg. No cause for it could be assigned. A few days later, she struck the back of her left hand on the side of the crib, and the slight injury resulted

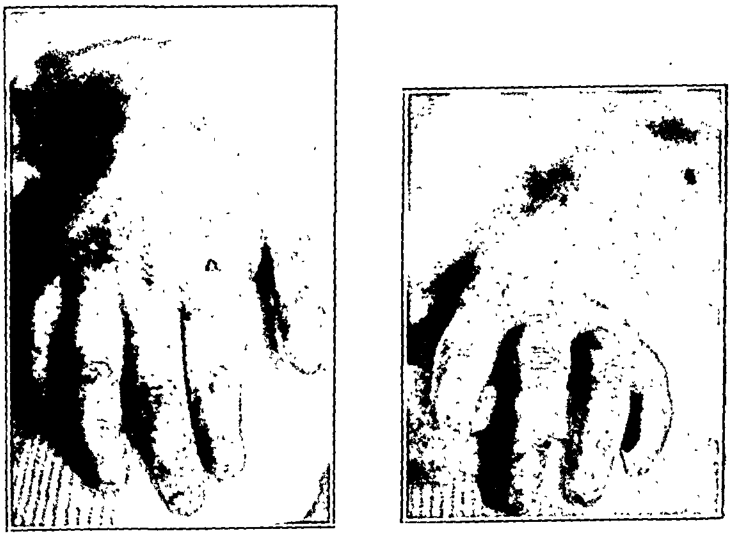

Fig. 3.—Showing atrophy of nails.

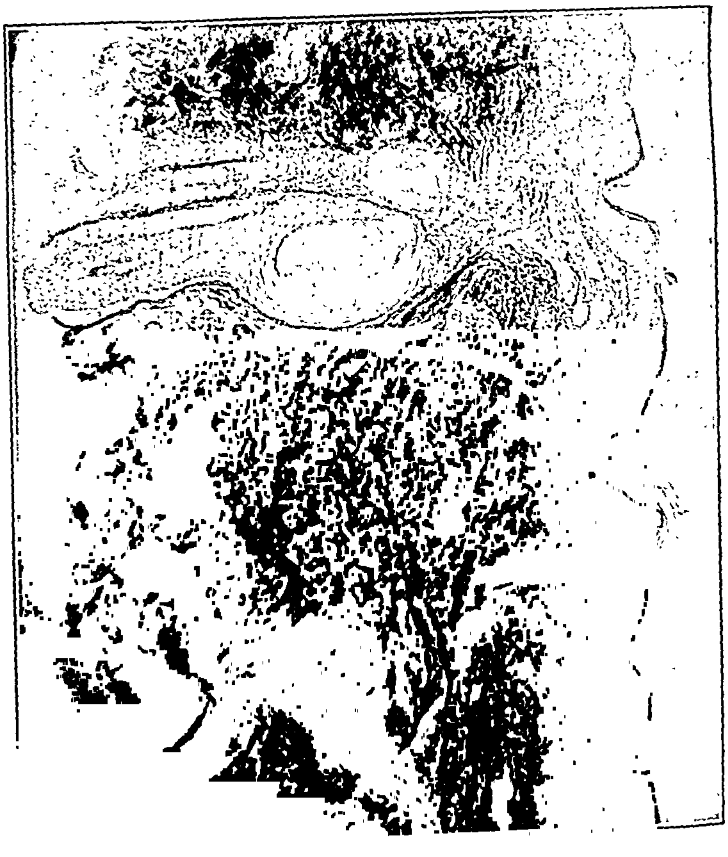

Fig. 4.—Section showing absence of elastic tissue in papillary and subpapillary regions and hair follicle.

in the development of a large hemorrhagic bleb one hour later. Since then the skin has never been entirely free from lesions. No part appears to be exempt. Vesicles have developed on the buccal mucous membrane frequently since the third month. As a result of repeated exfoliation, the finger nails have practically disappeared, and the toe nails have become atrophied and deformed. In consequence of injuries to the scalp, and the ensuing development of bullæ, several bald spots have appeared. The patient becomes cold easily, and often complains of chilliness when her brother is not suffering in the least. There has never been excessive sweating. The lesions are almost painless. They itch very little, and heal promptly. They form rather slowly—in from one-half hour to two hours after the receipt of the injury. Commonly they contain only serous fluid, but occasionally, following considerable injury, they are filled with blood.

Examination.—The patient is a well nourished child, a blonde, and rather large for her age. The hair is long and silky. There are three spots of cicatricial alopecia on the scalp. The teeth are normal. The buccal mucous membrane is paler and smoother than usual, and the tongue is partly bound down. The pharynx appears to be unaffected.

On the body and limbs are numerous lesions in various stages of development or subsidence. On the back of each hand is a considerable number (20 or more) epidermic cysts (minute, pale, flat or cup-topped elevations). In these localities the skin is thin, parchment-like and atrophic. Both palms are marked by the remains of recent bullæ. Friction with a rough towel produces blebs. The seats of former lesions are not wholly immune, but it is more difficult to produce bullæ here than on surfaces which have never been injured.

In four blood counts, made at intervals of one month, the highest number of whites found was 12,400, and the lowest, 6,800. An average of the four gave 39 per cent. polymorphonuclears, 41.2 per cent. small mononuclears, 11.2 per cent. large mononuclears and transitionals, and 8.6 per cent. eosinophils. The serum in the blebs contains very few eosinophils. Exposures to the *x*-rays, for from three to eight minutes, at a distance of 12 cm., a soft tube being used, invariably result in the production of bullæ (as in Berger's[3] case). The lesions heal within the usual period, and we have not found the areas thus treated any less liable to subsequent injury than those which have not been exposed to the rays.

Histopathology.—A piece of the uninjured integument, measuring 1 by 2.5 cm. was excised from the right upper arm under chloroform anesthesia. This material was cut in two, and one portion fixed in alcohol, the other in 10 per cent. aqueous solution of formalin. Later the formalin specimen was divided, and one-half mounted in celloidin, the other in paraffin. For comparison, sections of normal skin, taken, post-mortem, from the upper arm of a three-year-old child, were used, together with some material secured (also post-mortem) from the chest of a fifteen-year-old boy. The sections intended for study of the general structure were stained with hematoxylin-eosin. For elastic fibers Weigert's elastic tissue stain and Unna's orcein mixture were employed. In the hematoxylin-eosin sections the only changes observable in the horny layer are those which might occur as a result of acute edema. The cells are plumper and more rounded than normal, and those in the uppermost layers are less flattened than the ones in the fourth and fifth layers of the control. The outer (upper) portion of the section stains fairly well, but as the granular stratum is approached the coloring becomes faint and pale. The nuclei throughout stain very poorly. In the prickle-cell layer the interepithelial channels are widened and some of the fibrils are broken. There is some granular degeneration of the cells that constitute the lower part of the rete, and the nuclei stain irregularly. The interpapillary processes are swollen and edematous. The papillæ also are swollen, and the blood and lymph vessels are somewhat dilated, but there is no cellular infiltration. In the subpapillary region there are some lymphocytes and considerable numbers of connective tissue cells in the neighborhood of the vessels. The edema is less in the deeper regions, and there is little or no perivascular infiltration, but the vessels here also are dilated. Some of the coil glands are slightly affected. Their component cells stain irregularly, and the lower portions of the ducts are at some points blocked with cells, but there is no dilatation.

It is extremely probable, as Politzer[4] has suggested, that practically all of these changes occur as a result of injuries sustained by the skin during the performance of the biopsy. This also would account for the slight difference in the microscopic findings of various observers. But the fact that there must be a predisposition to injury on the part of the skin must also be taken into consideration. Until recently no plausible reason for this lack of resistance had been found. That it was due to some structural fault had been suggested by Payne,[11] Elliot,[5] Gilchrist,[6] Welch,[7] and others, but the exact nature of this peculiarity escaped the notice of a large number of careful investigators. It is when the stains for elastic tissue are used that this typical and, so far as we know, specific anatomic difference between the sections of normal skin and those of epidermidolysis bullosa is shown.

Stanislawski,[8] working in Podvisotski's laboratory at Odessa, was the first to note the absence of elastic tissue in the lesions of the affection, but, in spite of the fact that the excellent drawings with which his article is illustrated fail to show the presence of elastic fibers in the upper corium, he specifically states that this tissue was normal in the uninjured localities. Engman and Mook[9] pointed out that the elastic fibers were almost or entirely absent in the papillary and subpapillary regions of the derma in not only the bullæ, but in the apparently normal skin as well.

In the sections from our case scarcely a trace of this tissue is to be found in the upper corium. Below the subpapillary region the network is fairly heavy and regular, but as it passes upward it quickly shades off into a thin, friable-looking mesh which disappears practically altogether when the upper derma is reached. The fibers are entirely absent in the hair follicles as well, a fact which has not been noted by previous observers.

The controls show the thick, wavy fibrils running up into the papillæ, and passing into the mucous layer above, to finally terminate between the cells of the basal layer of the epidermis. We consider it extremely probable, as Pusey[10] suggests, that these prolongations of elastic tissue constitute an important factor in binding together the two major layers of the skin, and we believe that the almost complete absence of these fibers in this region in epidermidolysis bullosa undoubtedly explains the predisposition to injury manifested by the integument in cases of this affection.

Inasmuch as this condition is a congenital one in practically every instance, and hereditary in only about 50 per cent. of the cases, it appears to us that the term "epidermolysis bullosa congenita" is to be preferred to "epidermolysis bullosa hereditaria." Dr. Achilles Rose has kindly informed us, however, that the expression "epidermolysis" is incorrect, and that "epidermidolysis" is the proper word to employ. Although it may appear injudicious to suggest a new name for a disorder which has already suffered from over-christening, it is never too late to give an affection its proper designation, and so, in this instance, the title "epidermidolysis bullosa congenita" is used.

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[3] Berger: Archiv f. Dermat. u. Syph., lxxx, 23.

[4] Politzer: Jour. of Cut. Dis., 1899, p. 539.

[5] Elliot: Jour. of Cut. Dis., 1895, p. 10.

[6] Gilchrist: Jour. of Cut. Dis., 1899, p. 539.

[7] Welch: Quoted by Gilchrist, Jour. Cut. Dis., 1899, p. 539.

[8] Stanislawski: Russk. Jur. of kozhn. i. ven boliezn, v, 1903.

[9] Engman and Mook: Jour. Cut. Dis., 1906, p. 55.

[10] Pusey: Prin. and Prac. Derm., 1907, p. 23.

[11] Payne, Lancet, 1893, ii, 425.

We desire to express our indebtedness to Dr. Harry Czarlinsky, deputy coroner of Jackson County, for a liberal supply of post-mortem material, and especially to Dr. O. L. Castle for his kindness in preparing for us a large number of microscopic specimens.

610 Commerce Building.

EXPERIMENTAL EPIDEMIC POLIOMYELITIS IN MONKEYS

SIXTH NOTE: CHARACTERISTIC ALTERATIONS OF THE CEREBROSPINAL FLUID AND ITS EARLY INFECTIVITY; INFECTION FROM HUMAN MESENTERIC LYMPH NODE *

SIMON FLEXNER, M.D., and PAUL A. LEWIS, M.D.
NEW YORK

In our last communication,[1] we pointed out that by making use of the filterable nature of the virus of epidemic poliomyelitis we had succeeded in detecting it in the nasal and pharyngeal mucosa of the monkey, from which we concluded that one path of elimination of the virus was by way of the nasal mucosa through its lymphatic connections with the pia arachnoid of the brain. On the basis of this observation, we assumed that infection in the monkey might be accomplished by the reverse route, namely, from the nasal and pharyngeal mucosa, and that this route probably represents one of those traversed by the virus in the course of spontaneous infection in man. We have made some experiments covering this point and have ascertained that when an emulsion of the spinal cord from a recently paralyzed monkey is brought into intimate contact with the scarified mucous membrane of the nose and pharynx infection results. In the protocol that follows, note should be taken of the location of the paralysis in the muscles of the upper half of the body.

Experiment 1.—March 15, 1910: *Macacus rhesus*, ether anesthesia; scarified nasal and pharyngeal mucosa; dropped a milky suspension of spinal cord into nose and rubbed it in gently with cotton pledget. March 18, reapplied same suspension. No immediate effect. March 21, 8 a. m., paralysis of muscles of neck and arms; legs strong but animal cannot stand; died during night of the same day.

In a recent publication,[2] we described the series of changes in the meninges which we believe precede the development of the vascular impediments that ultimately cause paralysis. We have followed the alterations which take place from day to day, following intracerebral inoculation of the filtrate, and have found them to be of rapid development and characteristic nature.

When a considerable dose of filtrate is injected, the cerebrospinal fluid secured twenty-four hours later by lumbar puncture is of normal quantity but contains a considerable number of small cells, hardly exceeding a lymphocyte in size but showing a polyform nucleus, a few lymphocytes, and some red corpuscles. At the expiration of forty-eight hours, the white cells have increased in numbers, but the cells with polyform nuclei still predominate. At the expiration of seventy-two hours, a large number of mononuclear cells have appeared and the fluid presents a striking opalescent appearance. On the day of paralysis, the fluid tends to be only slightly cloudy and contains a mixture of large and smaller (lymphoid) mononuclear cells, and a few cells with polymorphous nuclei.

The fluid withdrawn on the third day, which is several days in advance of the appearance of paralysis, contains the virus, and when injected intracerebrally it is capable of setting up paralysis in another monkey.

Experiment 2.—March 10, 1910: Inoculated *Macacus rhesus* intracerebrally, under ether anesthesia, with 1.5 c.c. of fluid obtained by lumbar puncture on third day after injection of filtrate. March 16, paralysis of left arm. March 17, paralysis of arms, legs and neck. March 21, died. Lesions characteristic.

These experiments show that the cellular changes in the meninges and cerebrospinal fluid begin immediately after the intracerebral injection of the filtrate and are thus present several days before the onset of the paralysis. Should this observation be confirmed for human beings, a valuable method of diagnosis of atypical and abortive or non-paralytic cases would be secured. An abrupt change in the nature of the cerebrospinal fluid, from being opalescent, rich in cells and spontaneously coagulable just before or at the time of paralysis, to a more limpid fluid, poorer in cells immediately after, often occurs. The spinal cord removed on the third day after an intracerebral injection shows beginning meningeal infiltration and normal vascular and nervous structures.

Through the kindness of Dr. W. T. Longcope of Philadelphia, we secured portions of the spinal cord and a mesenteric lymph node, preserved in glycerin, from a child of five years who had died on the fifth day of illness. The child was under the care of Drs. Marcy and Hodge. The symptoms were suggestive of infantile paralysis—onset sudden. Sections prepared from the spinal cord, kindly sent by Dr. Longcope, showed characteristic and extensive lesions of epidemic poliomyelitis.

Suspensions of the glycerinated spinal cord and mesenteric lymph node were each injected intracerebrally on March 8, into a monkey (*Macacus rhesus*). The animal inoculated with the spinal cord was well until March 19, when weakness and paralysis of the legs appeared. It was killed with ether. Characteristic microscopic lesions existed in the spinal cord. The monkey having received the suspension of the lymph node remained well until March 18, when paralysis of the legs and left arm appeared. Lumbar puncture yielded a faintly cloudy fluid containing an excess of mononuclear cells. The animal was killed with ether. Characteristic lesions were present throughout the spinal cord.

This experiment proves the virus of poliomyelitis is contained not only in the central nervous system but in mesenteric lymph glands, and suggests that it may be present in other organs in human subjects of the disease.

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* From the Laboratories of the Rockefeller Institute for Medical Research, New York.

[1] The Journal A. M. A., Feb. 12, 1910, p. 535.

[2] Jour. Exper. Med., March, 1910, p. 227.

FORMALDEHYD POISONING

FRANK A. ELY, M.D.
DES MOINES, IA.

In view of the paucity of literature[1] on formaldehyd poisoning, the following case seems worthy of record:

The patient, a boy of 3 years, gained possession of a bottle containing a few drops of a 40 per cent. solution of formaldehyd which he tipped to his lips as though in the act of drinking. He was immediately seized with a paroxysm of coughing and choking, but the attack soon ceased. The child's mouth was rinsed out thoroughly with water and he was soon at play as if nothing had happened.

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[1] References to the literature are given in The Journal, Jan. 29, 1910, liv, 370, and Jan. 15, 1910, liv, 221.

On the next day I was called and found the child suffering from a hoarse, laryngeal cough with accelerated and labored breathing. The pulse and temperature were normal and in every respect the child seemed to be in perfect health.

I made laryngeal application of adrenalin with temporary benefit. Inhalations of steam were advised and frequent teaspoonful doses of olive-oil were ordered to allay any pharyngeal or esophageal irritation.

Fifteen hours later I was called in great haste and found the child deeply cyanosed and showing every sign of laryngeal obstruction. I immediately transferred the patient to a hospital and called a specialist in consultation, hoping that intubation or tracheotomy might be performed and thus relieve the respiratory difficulty. Upon the arrival of the consultant, it was decided to defer operative procedures for the reason that we could not be at all sure that the obstruction did not extend low down in the trachea, in which case the introduction of a tube might produce an immediate fatal termination. Repeated applications of adrenalin were made and the breathing became somewhat easier, but during the night, eight hours after admission to the hospital, the child died.

Post-mortem examination, made six hours after death, showed a marked thickening of the mucous and submucous coats of the epiglottis, larynx and trachea, with a superficial necrosis which extended to the bifurcation of the trachea. The esophagus showed no pathologic changes, nor was there evidence of destruction of the mucosa of the mouth and pharynx.

The extensive thickening of the tracheal mucous membrane proved the wisdom of non-operative treatment because the morbid changes extended so low down that even a low tracheotomy would have failed to relieve the condition.

The points of greatest interest in this case are as follows:

1. The absence of systemic disturbance other than that produced by respiratory obstruction.
2. The absence of destructive changes in the buccal, pharyngeal and esophageal mucous membranes.
3. The extensive infiltration and necrosis of the tracheal mucosa extending below the point where a tracheotomy operation would be of value.

605 Citizens National Bank Building.

IODIN AS AN ASTRINGENT, ANTISEPTIC, DISINFECTANT AND GERMICIDE IN MOUTH DISEASES

EUGENE S. TALBOT, M.D., D.D.S.
CHICAGO

For an astringent, antiseptic, disinfectant and germicide in the mouth, there is nothing so convenient and quick acting as tincture iodin. I have used this drug as an astringent, antiseptic and disinfectant since 1878, but did not know of its germicidal properties until six years later, although I was obtaining the desired results of germ destruction.

Patients present themselves with fetor of the breath, pus about the teeth, inflamed gums, diseased alveolar processes, acid mucus and saliva, the latter being also ropy and stringy, plaques on the teeth and decay with all the forms of bacteria from the most harmless to the more dangerous pathogenic microorganisms such as the pneumococcus, diphtheria bacillus, tubercle bacillus and the germs of children's diseases. Miller has demonstrated more than fifty varieties of microorganisms in the mouth. Pus germs are often present in and about the necks of the teeth and easily infect wounds and inflamed tissue. These germs are also taken into the stomach at every swallow and some pass through into the intestines. While most of the better class of patients possess fairly cleanly mouths, yet from 12 to 20 per cent. of all patinets have pus germs in the oral cavity.

Tooth decay is due to lactic-acid ferment and nearly every person has it to a greater or less extent. Clinic and dispensary patients, and especially the poorer classes who never use brushes, washes or powders in the mouth, possess regular cesspools of filth. Before the fingers, even, are placed in such mouths, the mucous membrane, gums and teeth should be thoroughly painted—completely covered—with tincture of iodin. Enough iodin should be applied to run in between the gums and the teeth, and then it should be allowed to dry; afterward the mouth should be rinsed with water.

Attention was first called to this method of procedure by my researches on interstitial gingivitis. The pathology of this disease showed the inflammation to be deep-seated throughout the alveolar process. In order to reach this inflammation, iodin alone would penetrate the bone.

All people after the temporary teeth erupt have interstitial gingivitis more or less throughout life. The mouth of every patient of mine, therefore, who has any operation on the mouth or teeth, since I began this method, is treated to an iodin bath before or after the operation. This may occur every day, every other day or whenever the patient has an appointment.

The officinal tincture of iodin contains 7 per cent. of iodin dissolved in alcohol to which is added 5 per cent. of potassium iodid. This preparation, if used often will cause the mucous membrane to become tender and sore; it will also, in some patients, destroy the mucous surface. To overcome this difficulty, many years ago, I formulated the following, which I have called iodoglycerole:

Zinc iodid	15 parts
Water	10 parts
Iodin	25 parts
Glycerin	50 parts

The proportions were suggested by Prof. C. S. N. Hallberg of the University of Illinois School of Pharmacy, in order to obtain a clear preparation without deposits. As compared with the ordinary tincture of iodin, its astringent properties are greatly increased, the glycerin causes rapid absorption and the irritating effects are reduced to a minimum. The penetrating effect is remarkable. The glycerin thickens the preparation and prevents it from mixing with the saliva and running over the mouth as the ordinary tincture will do. Long, round, wood applicators can be obtained at the drug and instrument houses and on one end cotton is wound; this is saturated with the preparation and the gum margins above and below painted. The jaws are closed, the lips and cheeks distended and the application made as before, the teeth are also covered; the lips and cheeks are held away from the jaws until the iodin has dried.

No one drug will destroy lactic-acid bacilli and their ferment and thus stop tooth decay like iodin. Frequent applications will destroy all germs in the mouth and reduce mouth and general disease to a minimum.

Before operations on the mouth and fauces, the gums, teeth and mucous membrane should be given an application of iodin; especially in the removal of tonsils. After this treatment, and after the iodin has become absorbed, the tonsil or part to be operated on should receive similar treatment. This application should be made from 10 to 15 minutes before operation.

To prevent contagions and infections among public school children, their teeth, gums, and mucous membrane should be painted with iodoglycerole as often as once a month, during the school term. This method will greatly reduce tooth decay.

103 State Street.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1910," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

FILICIC ACID AND RELATED SUBSTANCES

Aspidium and pharmaceutical preparations thereof have long been used as teniafuges. The most recent work indicates that aspidium probably contains the following constituents, in approximately the amount indicated: Filicic acid, 3.5 per cent.; flavaspidic acid, 2.5 per cent.; albaspidin, 0.05 per cent.; aspidinol, 0.10 per cent.; flavaspidin, 0.10 per cent.; amorphous acid, 5.0 per cent. and filicic nigrine, 6.0 per cent. These substances are, for the greater part, derivatives of phloroglucinol, and some of them are ketones possessing acid characters.

The various formulas assigned to the filicic acids and the different results reported regarding their physiological activity, have given rise to much confusion, leaving the chemistry in an unsettled condition. One of the first formulas assigned to filicic acid is that of Luck—$C_{26}H_{30}O_9$, which differs considerably from the formula—$C_{14}H_{18}O_5$—given this substance by Grabowski and $C_{14}H_{16}O_5$, as suggested by Daccoma. Later two forms, a crystalline and an amorphous filicic acid, were recognized by Poulson, who suggested the formula, $C_{35}H_{40}O_{12}$ for the crystalline filicic acid and $C_{35}H_{42}O_{13}$ for the amorphous acid, which latter he considered as the active therapeutic principle of aspidium. Poulson believed the crystalline acid to be the anhydride of the amorphous acid. More recently, Gallas has stated the formula for both the crystalline and the amorphous filicic acid to be $C_{18}H_{22}O_6$. Gallas and later Kraft concluded that one form of the acid was the lactone of the other form. Filicinic acid, which has the formula ($C_8H_{10}O_3$) is sometimes confused with filicic acid. Besides a difference in the theories regarding the constitution of the various filicic acids, there has been considerable controversy over the anthelmintic properties of these substances.

Our knowledge of the subject is very imperfect, but the majority of authors still accept filicic acid as one of the active constituents of aspidium.

FILICIC ACID, AMORPHOUS.—Acidum Filicicum Amorphum.—Amorphous filicic acid is an organic acid $C_{35}H_{42}O_{13}$, obtained from several species of aspidium.

Amorphous filicic acid is a white, or yellowish powder, without odor or taste, melting at 125° C. (257° F.), soluble in cold alcohol.

Actions and Uses.—Amorphous filicic acid has been recommended as an anthelmintic, and is generally considered one of the active principles of several species of aspidium.

Dosage.—0.5-1.0 Gm. (8 to 15 grains) given with calomel or calomel and jalap.

Note:—The crystalline filicic acid, preferably desig- At the ex-
filicinic acid, which is considered as an anhy- the white cells have
is devoid of anthelmintic action, and
the amorphous. the cells with polyform nuc- gnated as
ride of the amorphous,
must not be used in place of

FILMARON.—Filmar At the expiration of
constituent obtain ber of mononuc
(the rhizome of Dry ents a str
ralyon, $C_{47}H_{54}O_{16}$, is an active anthelmintic
d from the ethereal extract of aspidium
opteris Filix Mas).

Filmaron is obtain
it in the form of a m
liberated and suitably
d from the male fern extract by isolating
tallic salt. from which the free filmaron is
purified.

Filmaron occurs as a s
in water, difficultly solu
rather difficultly soluble in
in all proportions in ether
traw-colored amorphous powder, insoluble
ble in ethyl and methyl alcohols, and
petroleum ether. It is readily soluble
amyl alcohol, chloroform, benzene, carbon disulphide, and acetone, and also, though with partial decomposition, in solutions of the alkalies and alkali carbonates. The alcoholic solution exhibits a slightly acid reaction. Filmaron melts at about 60° C. (140° F.). It exhibits a strong tendency to cake together to form a resinous mass which is difficult to reduce to powder and dispense, hence it is not marketed in substance, but as a 10 per cent. castor oil solution, which is known as "Filmaron oil."

0.5 Gm. filmaron and 5 Gm. pumice stone, and 1 Gm. magnesia are finely triturated with 250 Cc. water, the mixture shaken for half an hour, and then filtered. On passing a rapid current of carbon dioxide through the filtrate, a voluminous, flocculent precipitate forms; the filtrate should afford but very slight precipitate on the addition of hydrochloric acid.

On dissolving 0.1 Gm. filmaron in 0.2 Gm. acetic ether or 0.2 Gm. carbon disulphide by rotation in a test tube, and setting the stoppered tube aside for three days, no separation should have taken place at the end of this time (absence of other male fern constituents; filicic acid and flavaspidinic acid).

0.1 Gm. filmaron should completely dissolve in 0.5 Gm. warm petroleum ether, and leave no more than a slight trace of undissolved substance. To detect the filmaron in the castor oil solution (filmaron oil), dilute the filmaron oil with ether, shake out with sodium hydroxide solution, acidulate the alkaline liquid, and then take up the liberated filmaron with ether. On evaporating the ether the filmaron is obtained as a residue.

Actions and Uses.—Filmaron is said to exhibit the specific action of male fern extract and to be useful as an anthelmintic for expelling intestinal parasites.

It is claimed to be devoid of the injurious side actions sometimes exhibited by the oleoresin of male fern and to be harmless when given in the dose necessary for the expulsion of tape worm.

Dosage.—See Filmaron Oil.

Manufactured by C. F. Boehringer & Soehne, Waldhof near Mannheim (Merck & Co., New York). U. S. trademark No. 40,558.

Filmaron Oil.—Filmaron oil is a 10 per cent. solution of Filmaron in castor oil.

Dosage: 10 Cc. (2½ fluidram).

(*To be continued*)

Therapeutics

CHOREA

Although the treatment of this disease is frequently discussed, its management is still too little understood, and the mistake of giving large doses of arsenic in the belief that, because the symptoms often abate during its administration, arsenic did it (it being forgotten that acute chorea is a self-limited disease) is still prevalent. Poisonous doses of arsenic can never be beneficial in chorea.

Dr. John Allan, of Edinburgh, Scotland, in the *American Journal of the Medical Sciences,* February, 1910, offers some valuable recommendations for the management of chorea. He well states that the most important factor in its successful treatment is more or less absolute rest and removal from all sources of frets and teasing which may occur when a child so afflicted, even mildly, is sent to school or allowed to associate with other children. Even if the disease is mild, the child should be put absolutely to bed, or at least should be put to bed several times during the day. From three to five weeks of bed rest and then two or three weeks of intermittent bed rest is the greatest promoter of quick recovery and
In view of prevention of cardiac complications. Hard
poisoning, the following case ercise, or even much walking, should
is the best child of 3 years, gained possession child has recovered
solution of formalin
playing or hard ex
be prohibited for some weeks after a
sufficiently to be about. During the period of rest in
bed massage should be administered daily, as soon as
there is no fever, and, of course, there may be no fever at
all. The massage should be more or less general, depending on its effect on the child.

More or less isolation of a choreic child is essential. Only those persons should come near the patient whose judgment is such as not to fret the child by their presence. When it is possible a sensible nurse is the best caretaker of the patient, as nervous, neurotic or fretted mothers are not the best nurses for these children.

The advantage of any particular specific diet is doubtful. The diet should depend on the acuteness of the symptoms or the amount of fever. If there is fever, the diet should be light but nutritious, perhaps mostly milk. If there is no fever, a sufficient, easily digestible, mixed diet, with perhaps meat in small amount only, is the best. Of course, tea, coffee, alcohol or any other excitants are prohibited.

It is essential that the bowels should be kept active in the manner found the pleasantest and the simplest, preferably with cascara or with phenolphthalein.

Warm baths every day or every other day, if the patient's movements are not too severe, are quieting and restful, and, with the massage, keep the skin in good condition.

In spite of the long-continued use of arsenic in chorea, it may be stated that there is no specific treatment for this disease. Those who advise the use of arsenic state that it must be rapidly pushed to the point of saturation of the tissues, i. e., to the point of tolerance. Some state that, if it does no good in the first two weeks, it will do no good at all. Others object to its use on account of the fact that in order to do good it must literally poison the patient; in other words, that the nervous system is more or less paralyzed by it if it inhibits the muscle movements in chorea. If given in small doses it probably is of little, if any, value, as when the disease becomes better it becomes better because it is time for the chorea to improve (it tending to recovery), but it does not recover on account of the small doses of arsenic. Arsenic pushed to rapid effect will frequently cause albuminuria and even nephritis, and casts and blood cells will be found in the urine. If the urine of every patient were studied daily during the administration of large doses of arsenic, less arsenic would be given. While small doses of arsenic in many anemic conditions (and in chorea the patients are often anemic) will stimulate the production of red blood corpuscles, large doses of arsenic will often cause destruction of red blood corpuscles.

Whether or not chorea is allied to rheumatism, Allan believes that acetyl-salicylic acid (aspirin) is a drug of great value in its treatment. He finds the best method of administering it to children is as follows:

℞.	gm. or c.c.		
Acidi acetyl-salicyli	8		ʒiiss
Acaciæ	q. s.	or	q. s.
Syrupi aurantii	25		fl.℥i
Aquæ chloroformi, ad	100		ad, fl.℥iv

M. et Sig.: A dessertspoonful, in water, every 4 hours. [This must be well shaken.]

This dose, he finds, is suitable for a child 6 years of age, but it should be increased as the child's age increases until at about puberty he gives from 90 to 120 grains a day. He says that acetyl-salicylic acid should never be given in tablets, and should not be prescribed with alkalies. He finds less symptoms of salicylism than occur from the salicylate of sodium and he does not find it depresses the heart. He quotes the German authorities as believing that acetyl-salicylic acid has an hypnotic as well as analgesic effect.

At times strong hypnotic drugs are required, and Allan prefers sulphonethylmethanum (trional), but some patients require stronger quieting drugs, as chloral and chloralamid.

If the heart is weak and a cardiac tonic is required, he prefers strophanthus in the form of the tincture.

As soon as convalescence is established, iron is certainly required. It may or may not be combined with small doses of arsenic. Of course, the acetyl-salicylic acid should be stopped as soon as the choreic movements have ceased.

It is needless to emphasize the necessity for removal or correction, as soon as possible, of any reflex irritation that may have caused or aggravated the chorea, be this intestinal worms, carious teeth, phimosis, clitoris adhesions, eyestrain, otitis media, or adenoids.

A patient who has recovered from an acute chorea should be given an outdoor, quiet life for several months. School work should be absolutely prohibited. If the chorea has occurred about puberty in young girls, all excitement and the strain of school life should generally be forbidden until menstruation is thoroughly and regularly established. Disturbances of menstruation are frequently the cause of chorea.

UNNECESSARY BLINDNESS

The caption of this article is copied from the *Journal of the Minnesota State Medical Association and the Northwestern Lancet* (February, 1910). The very association of these two words presents a truth that cannot be too frequently emphasized, and still, with all the discussion on the subject, it is not daily recognized that ophthalmia neonatorum, with its dire consequences, can and should be prevented. A symposium on ophthalmia neonatorum is presented in the above-mentioned journal, and ends with the following conclusions:

"1. The conjunctiva of the newly born is peculiarly liable to infection.

"2. Many germs may cause the infection, but the gonococcus is responsible for at least 65 per cent. of the cases and for nearly all of the severe infections.

"3. Ophthalmia neonatorum may almost surely be prevented.

"4. The 2-per-cent. silver nitrate is the surest prophylactic.

"5. The 1-per-cent. silver nitrate is nearly as valuable.

"6. Bichlorid of mercury, 1-2,000, is a good substitute and should be used if one has not the silver.

"7. If a prophylactic be used in the eyes of every newborn baby, the present rate of ophthalmia neonatorum will be greatly reduced.

"8. The treatment of the disease should always be turned over to the ophthalmologist."

Practical Applications of Salt in Epilepsy.—A. Ulrich has found that the symptoms of bromin poisoning rapidly subside when salt is given internally; the motor symptoms especially yield at once to the action of the salt. Even the *fetor ex ore* subsides under its influence. In his article on the subject in the *Neurologisches Centralblatt*, 1910, xvi, 74, he states that bromin acne is also rapidly cured by local application of a 10 per cent. salt solution. There seems to be no doubt, he says, that salt is the antidote to bromin. He also reports that he was able to bring on an epileptic seizure in 12 cases of genuine or Jacksonian epilepsy by giving 20 or 30 gm. of salt a day for a few days for diagnostic and therapeutic purposes. In one of the 3 cases reported in detail, the patient had had no severe seizure for several months and was in a condition of excitement bordering on mania. Administration of 30 gm. of salt on two successive mornings brought on a seizure after which the patient's mind was apparently normal. In another case the salt was given to disclose a possible epilepsy in a medicolegal case, and the findings were positive.

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These extensive changes in the oldest medical school in the United States are sure to have a profound influence. They constitute another illustration of the present rapid development of medical education in this country.

SENATOR OWEN ADVOCATES A DEPARTMENT OF HEALTH

The declaration of President Taft at the University of Pennsylvania last year that "certainly the economy of the union of all health agencies of the National Government in one bureau or department is wise" bids fair to find expression in law. This is shown by the bill introduced by Senator Owen, providing for a Department of Public Health. In advocating the bill,[1] Senator Owen pleaded the law of precedent in accordance with which other departments have been created by assembling and coordinating pre-existing bureaus, and urged Congress to redeem the pledges on this subject made in the platforms of both the great political parties. He also pointed out the necessity of having a department with ample power, as the only means of conferring on the health agencies of the country such prestige and influence as would afford adequate protection to the people.

Senator Owen made some statements which tend to impeach the Department of the Treasury as a competent administrator of the health interests of the country. He stated that when he applied to the Surgeon-General of the Public Health and Marine-Hospital Service for certain information, he, a senator of the United States, could not get the information for two weeks or until the Secretary of the Treasury had returned to Washington. When the Surgeon-General finally made a statement to Senator Owen it was by express permission of the Assistant Secretary of the Treasury. This is an illustration of the humiliating status of our national health service under the existing system. It is true that until recently the Public Health and Marine-Hospital Service has been more distinctly autonomous than would seem to be indicated by the two foregoing incidents, but it was only by tolerance and not because the Secretary of the Treasury did not have the power at any time to subordinate that service by executive order. Nor can we reproach the Secretary of the Treasury. Central responsibility must carry with it central authority, and in national health administration that authority, under the President, resides in the Secretary of the Treasury. So it is not against the Secretary of the Treasury nor against the Surgeon-General of the Public Health and Marine-Hospital Service that Senator Owen directs his shafts, but rather against the laws that permit a system that belittles that which ought to be dignified and weakens that which ought to be strengthened.

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[1] Department of Medical Economics, p. 1150.

Francisco than about stamping out the plague. Evidently "revenue" and "health" are such incompatible propositions that, in fairness to either, they cannot be administered jointly by the same agency.

Senator Owen has made clear that any attempt at progressive legislation must be in the direction of a department and not of a bureau, since the latter is the very thing from which we are endeavoring to escape. On this point, Senator Owen insists, as President Taft pointed out, that "it is generally agreed that these bureaus should all be brought together as one working body. To bring established bureaus under a new 'bureau of public health' would be to lower the dignity of the present bureaus by making them the subordinate bureaus of a new bureau which would be offensive to every bureau so subordinated. To bring these bureaus under a department would not lower the dignity of a bureau thus coordinated with other bureaus under the department and would, I believe, generally meet the approval of the government officers employed in the bureaus so coordinated, giving them a new dignity by being a distinct branch of a department of public health, through which they could enlarge their efficiency and find better expression and publicity of work done for the public health." These considerations prompted Senator Owen to introduce this bill providing for a department and not for a bureau.

It is impossible to review every phase of Senator Owen's speech, the full text of which will be sent by him to any one on application. This movement and especially this enthusiastic propaganda on the part of a United States Senator is gratifying and encouraging to all those who have long sought to interest our national legislators in public health matters. If as a result a Department of Health is created, the visions of years will be realized. Even if this end, so much to be desired, cannot be secured, the campaign ought at least to insure a strong bureau of public health located in a department in which its work shall be untrammeled and not subordinated to other interests. Such a result will be a marked advance in the campaign for the protection of public health, and, even if it is not all that can be desired, will be well worth the effort.

THE FOURTH-OF-JULY SACRIFICE—MUST WE HAVE IT THIS YEAR?

Seven years ago THE JOURNAL, realizing the enormous sacrifice of human life in connection with our annual celebration of the Fourth of July, and believing that the public should be made accquainted with the actual figures, undertook to gather and publish accurate statistics regarding the matter. Every possible care has been taken each year in collecting these statistics, large numbers of individual cases being followed up, and sufficient time being allowed to elapse before final publication so as to include termination of the cases of lockjaw following Fourth-of-July wounds. For the first year or two the figures presented were apparently not appreciated but gradually they have been, and during the last two or three years they have been made the basis of a propaganda for a more sensible method of celebrating our national holiday. While the results of the propaganda have not been all that could be wished, it is most encouraging when cities like Baltimore, Cleveland and Washington have taken such a vigorous stand that last year they eliminated the fatalities and practically all of the casualties.

The outlook this year is promising. Never before has the subject been so widely and earnestly discussed in all classes of publications. The statistics have been utilized by the monthly magazines, and by various kinds of periodicals, including the newspapers. One magazine[1] this month devotes four pages to graphic illustrations of the horrors of the day as they have been observed in the past, and uses the statistics compiled by THE JOURNAL—although without credit—to show the gruesome results. Another magazine[2] calls attention to the "coming sacrifice" and says that "for scores of healthy happy boys and girls the days of life are nearly ended." It pictures startlingly the results of a vote by Congress, if that were possible, to sacrifice one unknown boy each year as a national Fourth-of-July offering—the extra editions of newspapers announcing this extraordinary action, the editorial denunciation of the law-makers, the public agitation and excitement, the petitions to Congress and the President, and the civil war that would surely follow an attempt to execute the decree. Such an attempted sacrifice, of course, is an impossible one, as the magazine says, but, if it could be seriously suggested for a moment, the pictured results would be true in every detail. All this would occur over the contemplated sacrifice of one unknown boy; and yet we supinely allow, year after year, the slaughter of hundreds, and the mutilation of thousands, causing desolation and anguish in many homes.

The public is becoming aroused on the subject. In every part of the country individuals, civic societies, and other organizations are taking up and vigorously agitating the matter, and one organization has taken steps for the formation of a national committee for the promotion of a "safe and sane Fourth." In cities, in which quickest and best results can be obtained, the authorities are taking action, and to those already having effective legislation many will be added this year. The medical profession, which comes in immediate contact with the results of the present custom of celebrating the holiday and realizes their frightful extent, should take the lead in agitating such measures as will speedily put an end to this needless sacrifice of life and limb.

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[1] The Ladies' Home Journal, April, 1910.
[2] Popular Mechanics, March, 1910.

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[1] Department of Medical Economics, p. 1159.

Medical News

DISTRICT OF COLUMBIA

Personal.—Dr. John E. Walsh, sanitary inspector and bacteriologist of the health department of Washington, has resigned.——Dr. Tom A. Williams, Washington, has been elected foreign corresponding member of the Paris Neurologic Society.

Society Election.—The Medical Society of the District of Columbia, at its annual meeting, elected the following officers: Dr. Louis Mackall, president; Drs. D. Olin Leech and Philip S. Roy, vice-presidents; Dr. Dwight G. Smith, corresponding secretary; Dr. Henry C. Macatee, recording secretary; Dr Charles W. Franzoni, treasurer; Dr. Edwin L. Morgan, librarian, and Drs. D. Olin Leech, Henry B. Deale, Francis R. Hagner, John F. Moran and Raymond T. Holden, censors.

GEORGIA

Sanatorium Site Selected.—The City and County Subcommittee on the Tuberculosis Sanatorium site for Atlanta has decided on a piece of property, thirty-seven acres in extent, half a mile from the new city limits, high and well-drained, for which $7,000 is asked. The committee has already $20,000 in hand and can secure $10,000 more when it is desired.

State Medical Society Meeting.—The Medical Association of Georgia will hold its annual meeting in Athens, April 20-22. At the meeting of the council of the association, held in Cordele, March 10, Dr. Claude A. Smith, Atlanta, secretary-treasurer of the association, resigned on account of pressure of business, and Dr. Jarrett W. Palmer, Ailey, was elected to fill the unexpired term.

Personal.—At a called meeting of the Medical Examining Board of Georgia, held in Atlanta, March 9, Dr. Isham H. Goss, Athens, resigned as president of the board, and Dr. Francis M. Ridley, Lagrange, was elected for the unexpired term. Dr. Goss was elected to fill the unexpired term of Dr. Edwin R. Anthony, Griffin.——Drs. Bernard Wolff and Miller B. Hutchins have opened a sanitarium for the treatment of cancer in Atlanta.

ILLINOIS

Hospital News.—Dr. Paul E. N. Greeley has commenced the erection of a private hospital in Waterman.——An addition costing $25,000 will be made to St. Vincent's Hospital, Taylorville.

Building for Tuberculous Nurses.—The Illinois State Association of Graduate Nurses is endeavoring to raise $10,000 for the erection of a building to be used for the care of nurses attacked by tuberculosis.

County Sanatorium.—The board of supervisors of LaSalle county has recommended the remodeling of the present Isolation Hospital so that the building may be used as a county sanatorium for tuberculosis. A large porch is to be constructed around the building and proper provision made for open-air treatment.

County Retains Hospital.—At a meeting on March 23, of the Hospital Commission, consisting of representatives of Cook county and Chicago, it was decided that the county hospital is to be retained in charge of the county board. No more contagious diseases are to be treated in the institution and the city will build a hospital for contagious diseases.

Personal.—Dr. Glen W. Putnam, Grand Crossing, has succeeded Dr. I. W. Howard as surgeon of the Burlington Relief Association at Aurora.——Dr. Samuel M. Wylie, Paxton, has returned from Palm Beach, Fla., greatly improved in health.——Dr. Eugen Cohn, assistant superintendent of the Anna State Hospital, has been appointed assistant superintendent of the Peoria State Hospital.

Gives Site to Hospital.—Mrs. Helen Morris, wife of Edward Morris, Chicago, has deeded the site of the Chicago Home for Convalescent Women and Children, valued at $10,000, to that institution. The gift makes possible the addition of a children's ward. The building at present on the site will be remodeled and a new four-story structure will be erected, doubling the capacity of the home.

INDIANA

Society Meeting.—The third annual meeting of the Fifth District Medical Society was held in Terre Haute, March 3. Dr. Orion E. Maddox, Rockville, was elected president; Dr. Daniel B. Miller, Terre Haute, vice-president; Dr. J. Randolph Gillus, Terre Haute, secretary, and Dr. Myron A. Boor, Terre Haute, treasurer.

Irregular Practitioners Found Guilty.—Colonel E. Wittey, Terre Haute, an advertising specialist, is said to have been fined $25 recently for practicing medicine without a license.——C. O. Buis, a so-called "suggestive therapeutist," of Princeton, is said to have been found guilty of practicing medicine without a license, March 10, and fined $25 and costs.

Personal.—Dr. Thomas H. McCorkle, Black Hawk, formerly of Terre Haute, is reported to be critically ill in St. Anthony's Hospital in that city.——Dr. Henry A. Denison, Indianapolis, is reported to have been committed to the Central Hospital for the Insane.——Dr. James D. Hillis, health officer of Lafayette, is a patient in St. Elizabeth's Hospital on account of an injury to the eye, caused by a long hatpin.

Ask for Larger Hospital.—The Indianapolis Medical Society is to bring pressure to bear on the city council to secure better accommodation at the City Hospital. The resolution adopted called on the authorities to take up the question of hospital care without delay, and to give to the community and city a hospital commensurate with its needs, and with the modern conceptions of the proper care of the dependent sick.

New Hospital Opens.—The Indiana Steel Company formally opened its hospital at Gary, March 23. The hospital is admirably located, well built and thoroughly equipped, has accommodation for about 125 patients, and has cost the company about $2,000,000. A special train from Chicago carried a number of Chicago physicians and other invited guests to be present at the dedication. The hospital will take care of the injured from all the industrial plants of Gary. Dr. Ira Miltimore is in charge of the institution.

LOUISIANA

Leprosy Found.—It is reported from Estherwood that a case of leprosy has been found at Mermentau Cove in Acadia parish. There are said to be nine other cases in the cove.

Extra Protection Secured.—The efforts of the health officers of the state and New Orleans to secure for the city during the summer months extra protection has been successful. The supplemental local inspection by the United States Public Health and Marine-Hospital Service will be reestablished.

Milk Commission Planned.—A milk commission to work in conjunction with the New Orleans and Louisiana boards of health, in the interest of a pure milk supply is proposed by the state pure food commissioner, Dr. Hamilton P. Jones. The duties of the proposed commission will be to ascertain what dairies have attained the specific standard, to give such dairies certificates.

Elections.—At the annual meeting of Webster Parish Medical Society, held in Minden, March 15, the following officers were elected: President, Dr. John E. Rooks, Doyline; vice-president, Dr. Risdon W. Smith, Dubberly; secretary, Dr. Shelly F. Martin, Minden; and treasurer, Dr. Rutledge C. Tompkins, Minden.——Dr. Edward L. McGehee, New Orleans, organizer of the Louisiana Antituberculosis League, organized a branch society at Lafayette, March 11. Dr. Lambert O. Clark was elected president of the league and Dr. George A. Martin, vice-president.

Personal.—Dr. Isidore Cohn has been elected by the board of managers of the Touro Infirmary, New Orleans, outdoor physician to the poor, vice Dr. Jules Lazard, deceased.——Dr. Domingo Bornio, New Orleans, has been elected grand dictator of the Louisiana Grand Lodge of the Knights of Honor.——At a meeting of the Italian Mutual Benefit Societies and other organizations at Hotel Monte Leone, March 18, Dr. Joseph A. Danna, chief surgeon of the Charity Hospital, the guest of honor, was presented an oil painting of himself, and also with a handsome engrossed scroll containing expressions of regard and esteem.

Popular Medical Lectures.—An extensive course of lectures under the auspices of Tulane University, Medical Department, New Orleans, began March 16, and will continue until April 22. The list of subjects is as follows: March 16, Dr. Charles W. Duval on "Cancer;" March 23, Dr. G. Farrar Patten on "Recollections of Student Life in Germany;" March 30, Dr. George Dock on "Typhoid Fever;" April 6, Dr. Charles Chassaignac on "Sexual Continence and Prophylaxis;" April 12. Dr. Paul Michinard on "The Management of Labor;" April 13, Dr. Jacob A. Storck on "Hygiene of the Gastrointestinal Tract;" April 19, Dr. C. Jeff Miller on "The Anatomical Basis Underlying Injuries and Repair of the Pelvic Floor;" April 26, *Irving Hardesty, Ph.D., on "The Anatomy* of the Ear in Relation to Theories of Hearing;" and April 27, Dr. J. T. Hasley on "Physiologic Action of Some Much-Used Drugs, with Demonstrations."

MARYLAND

Protest Against Optometry Bill.—The Medical and Chirurgical Faculty of Maryland has made a protest against the optometry bill at present before the legislature, *on the ground that it will license unskilled* men to treat diseases of the eye.

Personal.—Dr. Thomas C. Bussey, Texas, was stricken with cerebral [illegible] 19.——Dr. Ira Remsen, president of Johns [illegible], has been appointed a *delegate* from that institution to the centennial celebration of Berlin University, to be held next October.——Dr. *Granville* H. Richards, assistant superintendent of the University Hospital, Baltimore, has *settled* for practice at Fort Deposit.

Medical Association Meeting.—At the annual meeting of Howard County Medical Association, held in Ellicott City, March 19, the following officers were elected: President, Dr. Charles C. Tumbleson, Glenelg; vice-president, Dr. John M. B. Rogers, Ellicott City; secretary, Dr. Frank O. Miller, Ellicott City; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. Arthur Williams, Elk Ridge, and censors, Drs. John M. B. Rogers, Bernard J. Byrne, and William B. Gambrill, *all of Ellicott City.*

Report of Sanatorium.—The biennial report of Eudowood Sanatorium shows that 89 per cent. of the cases were cured, arrested, or improved, and that no deaths had occurred. There were 337 patients treated, of whom 159 were discharged. The total expenditures for the biennium were $37,539, and the profits from the farm were $624. During the last two years there has been a deficit of $13,500, and the legislature is asked *to appropriate $15,000, and a per capita allowance for main*tenance on the same basis as is allowed for the state sanatorium.

State Appropriations.—Dr. Hugh H. Young, president, and Dr. Arthur P. Herring, secretary of the Lunacy Commission, point out that by the bond issue of $600,000 *for the state care of* the poor insane, the state will save $285,000 in 1911 and 1912, and also that the bond issue will add only *one cent to the state* tax and will be paid off in fifteen years. The general appropriation bill as agreed by the committees of the two houses of the legislature, leaves out the appropriation of $10,000 asked for by the Medical and Chirurgical Faculty of Maryland, and the appropriation of $4,000 a year asked for by each of the four medical colleges of Baltimore. Johns Hopkins *University* is given $25,000 a year.

Baltimore

Must Report Births.—An ordinance is being prepared by the health department of Baltimore providing a penalty for failure of physicians to report births. It is asserted that the registration of births in Baltimore is more *incomplete than in any* other civilized city in the world.

Money for Baltimore Hebrew Hospital.—Mr. Frank Cahn, New York City, has given $1,000 toward the maintenance of the Children's Summer Camp of the Hebrew Hospital, which was started last year.——By the will of Samuel Frank the Hebrew Hospital *is bequeathed* $500.

Tribute to Dr. Welch.—On the evening of April 2, several hundred distinguished *representatives of medicine, science,* literature and art, industry and statesmanship are to assemble at a dinner at the Belvidere, given in honor of Dr. William Henry Welch. This tribute is in recognition of the commanding *position* in the field of pathology occupied by Dr. Welch, of his work in original research for the diminution of human suffering and saving of human life, and of his election *to the presidency* of the American Medical Association.

MASSACHUSETTS

Fund for Children's Hospital.—The building fund for the Children's *Hospital,* Huntington avenue, Boston, now amounts to $245,050, of which Francis W. Hunnewell, Wellesley, has contributed $150,000. During 1909 1,303 patients were cared for in *the wards* of the institution, 25,895 outpatients were treated, and 1,951 visits were made by the outdoor department. The new buildings will accommodate 150 patients, doubling the present capacity of the institution.

Bequests.—Vincent Memorial Hospital and Emergency Hospital, Worcester, each receives $2,000 from the estate of Mrs. Sarah E. Foster.——By the will of Mary S. Spaulding, Groton, a bequest of *$5,000 each is made* to the New England Hospital for Women and Children, the Massachusetts General Hospital, Perkins Institution for the Blind, and the Boston Home for Incurables.——By the will of the late Freeborn F. Raymond, the Newton Cottage Hospital is bequeathed $5,000 to endow the Mary P. Raymond free bed.

Personal.—The summer home at Hamilton of Dr. Orran G. Cilley, Boston, was entirely destroyed by fire, March 26.——Dr. John A. Leitch, Andover, has been appointed town physician.——The Worcester Home of Consumptives Association, at its annual meeting, March 8, *elected Dr. Carl* Crisand, president, and voted to *endorse the bill* giving cities and towns the right to erect public sanatoria *for* the care of incurable cases of tuberculosis, and provide for the establishment of the sanatoria by a mill tax.——Dr. William J. Collins has resigned as chairman of the board *of health of Northampton.*——Dr. William N. Noyes has been elected city physician of Salem.——Dr. Joseph F. O'Shea has succeeded Dr. Frank E. Stone as city physician of Lynn.——Dr. Charles W. Page, superintendent, and Dr. *Charles* Ricksher, assistant superintendent, of the State Insane Hospital, Danvers, have resigned.——Dr. *Maurice V. Tyrode, faculty instructor in pharmacology in Harvard* Medical *School,* has *resigned to take* effect September 1.

MICHIGAN

County Sanatorium to Be Established.—The Houghton County Board of Supervisors *adopted a resolution* at its last meeting *to submit to* voters at the spring election the proposition to raise $15,000 for the erection and maintenance of a county sanatorium for tuberculosis.

The Health of Manistee.—*Dr. Szymon Szudrawski, health* officer of Manistee, in his annual report, states that during the past year 652 *investigations* were *made,* of which 163 were positive; *312 cases of infectious* diseases were reported, and 269 disinfections were made, at a total *cost to the city* of *only* $224.17.

Lodge Practice.—At *the recent meeting* of the Oakland County Medical Society, held in Pontiac, an amendment to the constitution *of the society* was *passed by* a vote of 32 to 5, which stipulates that no member shall continue to do lodge practice and still continue to be a *member* of the society, unless he obtains for his *compensation fees similar* to those established by usage in the *community* in which he resides.

Sentenced to Prison.—Dr. George A. Fritch, Detroit, said to have been convicted of manslaughter in the case of Maybelle Millman, Ann Arbor, who died as the result of a criminal operation, was sentenced to imprisonment *for an indeterminate* term of seven and a half to fifteen years in the state penitentiary. The judge, *in making the usual recommendation in* indeterminate sentence law, recommended that the sentence of the prisoner be for fifteen years.

Personal.—Dr. Roy C. Perkins has succeeded Dr. Charles F. H. Freiberg as health officer of Bay City, and Dr. Harvey Gilbert has been placed in charge of the smallpox cases in the city.——Dr. Mina L. Fuller, physician of the State Industrial Home for Girls, Adrian, since 1891, has resigned, and Dr. *Emily* S. Stark, Detroit, has been chosen her successor.——Dr. Oscar C. Breitenbach has been appointed Escanaba representative of the State Board of Health on the regulation of the public water supply.——Dr. Flemming Carrow, Detroit, for eighteen years a member of the faculty of the University of Michigan, and a member of the State Board of Registration in Medicine, has decided to give up practice and has purchased a farm in the state of Washington.

MINNESOTA

Abortionist Sentenced to Jail.—Mrs. Elizabeth Schmitz, a midwife of St. Paul, who pleaded guilty March 14, to the charge of criminal abortion, has been sentenced to imprisonment for one year in the county jail.

Public Safety Commission Proposed.—Dr. Henry M. Bracken, secretary of the State Board of Health, has suggested a commission on public safety as one of the future possibilities of the state. His idea is to have a commission composed of three men, which will be in continuous session, and who will do the work now done by the Bureau of Labor, the Health Department, and the Dairy and Food Commission.

Personal.—Dr. John Jackola, Duluth, has returned after a years' stay in Berlin.——Dr. William D. Kelly, St. Paul, has been appointed chief surgeon of the Chicago, Milwaukee and St. Paul Railroad for Minnesota, Iowa and Wisconsin.——Dr. Albert F. Groves, Brainerd, who has been seriously ill with rheumatism, is reported to be improving.——Drs. Arthur S. Adams, Rochester, Charles E. Fawcett, *Stewartville, Frederick* L. Smith, Chatfield, Rolla C. Dugan, Eyota, and George Steven, Byron, have been appointed by the county commissioners of Olmstead county, physicians for the districts in which they are located.

MISSOURI

St. Louis

New Building for Hospital.—The St. Louis Skin and Cancer Hospital, which has been in operation in an old hospital building since its inception in 1906, will in the early summer occupy its new four-story hospital building, with largely increased facilities for the study and treatment of cancer and skin diseases. The hospital is wholly charitable, no private or pay patients being admitted. The funds for the erection of this new structure were furnished by Mr. George D. Barnard of St. Louis, the founder of the hospital, for whom the institution is to be named. It will be complete and modern in every detail, and specially constructed for the study of skin and cancer diseases. The Board of Directors has lately appropriated the sum of $8,000 annually for the department of cancer research, and has secured the services of Prof. Leo Loeb of the University of Pennsylvania, as director of research. The fourth floor of the institution has been reserved for the exclusive use of the research laboratory, and is to be fitted with all the apparatus necessary to prosecute the work along scientific lines. The directors are at present raising an endowment fund of sufficient magnitude to perpetuate the usefulness of the institution; so far they have met with gratifying success and hope in a short time to have sufficient means to put the institution on an adequate financial basis. The report of 1909 has not as yet been compiled, but that of 1908 shows an abundance and variety of clinical material for the prosecution of this special work.

NEW YORK

Medical Examination.—On April 23, the State Civil Service Commission, Albany, will hold an examination for medical superintendent of Letchworth Village, $4,500 with maintenance for superintendent and family. Applications should be filed before April 16.

Vital Statistics for January.—There were 12,866 deaths in the state during January, as compared with 11,481 in January, 1909. Influenza had an increased prevalence and fatality. Measles continued to be extremely epidemic. With an average daily mortality of 415, the death rate was 17.8 per 1,000. The birth rate for the month was 23.2 per thousand population.

Medical Society Elections.—At the annual meeting of Utica Medical Club, March 17, the folowing officers were elected: Dr. John Gormann, president; Dr. Arthur M. Johnston, vice-president; Dr. Frederick R. Ford, secretary-treasurer, and Drs. Morris J. Davies, William J. Schuyler, and William B. Roemer, trustees.——Preliminary steps were taken March 16, for the organization of a new medical society at Canandaigua, to be known as the Canandaigua Medical Association. Dr. Frank A. Brockmyre was temporary chairman and Dr. George W. Gregg, temporary secretary of the meeting.

New York City

Gift to Medical School.—Mrs. Helen Hartley Jenkins has given $100,000 for the endowment of the Marcellus Hartley Chair of Medicine in the New York University and Bellevue Hospital Medical College.

New Courses in Medicine at Columbia University.—During the summer of 1910 a new course in clinical pathology, bacteriology, physiologic chemistry, nutrition, and physical and medical diagnosis, will be instituted.

The Harvey Society.—The eighth lecture of the Harvey Society will be delivered by Professor Magnus-Levy of the University of Berlin at the Academy of Medicine, New York, on April 9 (not on April 2 as previously announced), at 8:30 p. m. The subject of the lecture will be "Pathology and Therapy in Diseases of Metabolism."

Cartwright Lectures.—Professor Magnus-Levy of the University of Berlin will deliver the three Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons of Columbia University at the New York Academy of Medicine, 17 West Forty-third street, on April 11, 12, and 13, at 5 o'clock. The subject of the lectures will be "Some Phases of the Chemistry of Diabetes."

Personal.—Dr. A. O. Shaklee, assistant in physiology and pharmacology in the Rockefeller Institute for Medical Research, has been appointed assistant professor of pharmacology in the Philippine Medical School, Manila.——Dr. Nell G. W. Bartram has been appointed a member of the staff of Kings Park State Hospital.——Dr. and Mrs. Simon Flexner and Dr. J. Morgan Howe have sailed for Bermuda.

Closer Relations Between College and Hospitals.—Closer relations are being established between the College of Physicians and Surgeons and Mount Sinai Hospital and the German Hospital. Drs. Nathan E. Brill, Emanuel Libman, Arpad G. Gerster and Henry W. Berg, of the staff of Mount Sinai Hospital, and Drs. Frederic Kammerer, Norbert Stadtmuller, and Otto Hensel, of the staff of the German Hospital, have received appointments in Columbia University.

Fellowship in Pathology.—Mount Sinai Hospital announces the establishment of a second fellowship in pathology to be known as the Eugene Meyer, Jr., Fellowship. The income of the fellowship, like that of the first, established in 1908, is $500 per annum. It is open to all graduates in medicine, and the term of appointment is for one year with renewal at the option of the committee, composed of Drs. Abraham Jacobi, Arpad G. Gerster, Frederick S. Mandlebaum, and Emanuel Libman. The object of the fellowship is the furtherance of scientific work of the hospital and to aid students to obtain laboratory training. The work may be done either in Mount Sinai Hospital or elsewhere, under the direction of the pathologist of the hospital.

Buffalo

Personal.—Dr. Charles F. Howard has been appointed chief of the medical staff of Providence Retreat, vice Dr. William C. Krauss, deceased.——Dr. John H. Pryor has been elected president of the board of trustees of the J. N. Adam Memorial Hospital.

Alumni Election.—At the annual meeting of the Buffalo General Hospital Alumni Association, held in Buffalo, Dr. Ernest L. Shurly, Detroit, Mich., was toastmaster. Dr. James W. Putnam was elected president; Dr. Frederick C. Busch, Buffalo, vice-president, and Dr. Thew Wright, secretary-treasurer.

Free Dispensary Established.—The Board of Health has decided to establish and maintain a free dispensary at the city hall, and has appointed Dr. Walter H. Vosburg, and Messrs. Frank E. Murphy and John T. Kornprobst as a commission to provide the necessary quarters, hire trained nurses, and furnish the equipment.

Gift for Nurses' Home and Contagious Pavilion.—Mrs. William Hamlin has bought the property adjoining the Children's Hospital on the west and has intimated that she will present the site to the management with the distinct stipulation that the money needed is raised for the new home. The new contagious pavilion for the hospital will cost about $30,000, of which $12,000 has already been subscribed.

PENNSYLVANIA

Personal.—Dr. Michael Austin, Josephine, has been appointed chief surgeon for the Lackawanna Coke Company at Wehrum, to take effect April 1.——Dr. Louis Jurist, Philadelphia, who has been seriously ill with pneumonia, is convalescent.——Dr. Florence H. Richards, Philadelphia, has been apponted medical director and teacher of physiologic hygiene in the William Penn High School for Girls.

Site for Tuberculosis Camp Acquired.—The state commissioner of health announced March 24 that he had purchased for $18,305, 311 acres of land near Hamburg, Berks county, for the state, on which the department of health will establish its proposed Eastern State Sanatorium for Tuberculosis. The site is in the foothills of the Blue Mountains, a mile from Hamburg, is very picturesque and is admirably adapted for the use to which it is to be placed.

Care for State's Defective Children.—A successful movement has been inaugurated by the Pyschologic Clinic of the University of Pennsylvania to extend throughout the state its work in the treatment of backward and defective children. The officials of the clinic recently offered their services to any community wishing to make studies in retardation and to gain knowledge of a proper treatment for defectives. Already more than 100 children have been examined by Dr. Leightner Witmer and his associates, who have visited Susquehanna, Media, Williamsport and other towns. It is said that several other school boards have arranged to utilize the services of the clinic.

Philadelphia

New Motor Ambulance.—On March 23, Dr. Joseph S. Neff, Director of Health and Charities, received the third motor ambulance for the use of the Municipal Hospital.

Hospital Pavilion Completed.—The new pavilion of the women's section of the Insane Department of the Philadelphia General Hospital has been completed and will be occupied in a few days. The new building will accommodate about 60 patients.

Railroad to Abolish Public Drinking Cup.—The officers of the Pennsylvania Railroad are endeavoring to perfect plans to abolish the public drinking cup from all waiting rooms in their stations and from all railroad coaches. A plan for individual drinking cups is being developed and will be tried.

Bequests.—The will of the late Henry C. Fox bequeathes $5,000 to the Presbyterian Hospital, $5,000 to the Howard Hospital and Infirmary for Incurables, and $5,000 to the German Hospital.——From the estate of the late Charles E. Etting, valued at $150,000, the sum of $10,000 is set aside to endow two perpetual free beds in the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases.——The will of the late Emma M. Shive bequeathes $500 each to the Methodist Hospital and the Philadelphia Home for Incurables.——By the will of the late Anna D. Evans, a bequest of $5,000 is made to the Germantown Hospital and Dispensary for the purpose of endowing a free bed, to be known as the "Thomas Wallis Evans and Anna D. Evans Memorial Bed."

April Housecleaning.—Dr. Joseph S. Neff, of the Department of Health and Charities, advocates calling on all members of the community to engage in a thorough housecleaning the first week in April. The street cleaning contractors will also be called on to aid in the city-wide movement for greater cleanliness as a preventive against the spread of disease. The fact that the death rate has run up this winter to 20 per 1,000, as compared with about 18 last winter and an average rate of 16 for the entire 12 months of 1909, has led to this decision. Among the causes for the increase are believed to be the severity and changeableness of the weather and the labor troubles. As so many men were out of work, it was difficult for their families to obtain proper food. One reason for the general housecleaning the first of April is the prevention of breeding of flies. This is the time to prevent their breeding and absolute cleanliness will go far toward reducing their numbers.

GENERAL NEWS AND COMMENT

Bubonic Plague in Hawaii.—Rear Admiral Cowan P. Rees, commandant of the Naval Station at Honolulu, cabled the naval department, March 19, that two deaths from plague had occurred on the Island of Honokaa and three on the Island of Hilo.

New Medical Association.—A medical association has been organized by the practitioners in the district between Warroad, Minn., and Fort Francis, Ont., and the following officers have been elected: President, Dr. Frank H. Stuart, Baudette, Minn.; vice-president, Dr. Alexander A. McCrimmon, Rainy River, Ont.; and secretary-treasurer, Dr. Dugald McBane, Rainy River.

Naval Medical School Graduation.—The closing exercises of the United States Naval Medical School, Washington, for 1910, were held March 24. Among the features of the program were an address and presentation of degrees by Secretary Meyer, and addresses by Dr. Edward Quintard, New York City, and by Surgeon General Charles F. Stokes. A class of twenty passed the final examination.

Sixth International Congress of Esperantists.—This congress will meet next August at Washington, D. C. Dr. Zamenhof, the founder of Esperanto, and a prominent oculist of Warsaw, Poland, will attend. The American members of the World Esperanto Medical Society will doubtless be present in force, as an effort will be made to organize an American branch of the society. Further particulars may be obtained from Dr. Kenneth W. Millican, 231 Metropolitan Building, St. Louis.

Panama Sanitation Reports Again Published.—In THE JOURNAL, Dec. 11, 1909, we commented on the fact that the monthly publication and distribution of the Reports of the Department of Sanitation of the Isthmian Canal Commission were eagerly looked for and carefully read by sanitarians all over the country and that their discontinuance in March, 1909, was unfortunate. We have now to announce that the reports are again being issued and that the back numbers from April to December, 1909, have been published and are available for reference, and may be obtained from the government printer. As we stated before, these reports are of importance not only in regard to canal sanitation but in regard to the management of diseases in the tropics generally.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 19, 1910.

Death from Fright: Curious Charge in a Case of Murder

A curious case of murder has just been tried in which the theory put forward by the prosecution was that the victim died from fright when she discovered that her son was attempting to poison her. An old woman, aged 75, was living alone in Coventry. She had a son who was a great trouble to her and to whom she lent money from time to time. Shortly before Christmas, he went about saying that his mother was very ill and would not live over Christmas, though she was in her usual health and was going about her duties. About this time he purchased some cyanid of potassium, saying that he wanted it for hardening tools. He alleged that he used it on a chisel, but the evidence showed that the chisel had not been so treated. He left the cyanid at his mother's house where there could have been no lawful use for it. He told people from whom he had borrowed money that he would have plenty after her death. On Christmas eve, the woman was found very unwell and drowsy and the prisoner admitted that he had given her laudanum "to do her good." He promised to call a physician and ostensibly went to do so but none came. On January 9 the woman was found lying dead on a sofa. In front of her was a glass which had contained cyanid of potassium. When shown the glass the prisoner remarked, "I know what is in it; it is cyanid of potassium." Asked how it came there, he replied, "How should I know?" He was arrested on the charge of poisoning and then the curious fact arose: the necropsy revealed no cause for death. The organs were healthy and no trace of the cyanid could be found in the body. The amount of cyanid in the glass was so small that in the opinion of the analyst it was not sufficient to cause death. The latter said in his evidence that the absence of all signs was not inconsistent with cyanid poisoning. Cyanid of potassium in the stomach would be converted into hydrocyanic acid, which is very volatile. He was of opinion, however, that death was most probably due to fright or some other external cause. It was suggested that the old woman died from fright when the glass containing the cyanid was presented to her by her son. In this case, he would be as guilty of murder as if she died from taking it. By order of the judge, a solution similar to that found in the glass was prepared and he and the jury smelt and tasted it. The defense was that the whole case rested on suspicion and that the woman died from syncope. The jury found the prisoner guilty of attempted murder. The judge passed the heaviest sentence possible for this crime, penal servitude for life.

Expedition to Study the Effects of High Altitudes

An international expedition for the investigation of the effect of high altitudes on medical and biologic processes has left England for the Peak of Teneriffe. The members are Professor Pannwitz of Charlottenburg, the president of the "International Commission for the Study of Biological and Medical Effects of High Altitudes and Sunshine;" Dr. Bancroft and Dr. Douglas, representing England; Professor Zuntz and Dr. Neuberg, representing Germany; Dr. Mascat and Dr. Plasse. representing Frence; and Professor Durig and Dr. H. von Schrötter, representing Austria. The primary object of the expedition is to continue the observations started by Professor Zuntz and his collaborators on Monte Rosa. At the same time the members will endeavor to extend the knowledge recently acquired of heliotherapy.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 10, 1910.

Personal

Like Professor Olshausen, Professor Senator will resign his position at the end of the summer semester. Senator was 75 a short time ago.

New German Mortality Tables

The official German mortality tables based on statistics of the decade from 1891 to 1900 have just been published. The new tables are intended to replace the German mortality tables published in 1887, which were computed on the mortality for the years 1871 to 1881. The new tables give a view of the changes in the death rate in the last thirty years. The average length of life of the male sex was calculated for 1870 as 35.8; for 1890, 40.56. For the female sex the corresponding figures are: 38.45 and 43.97. The expectation of life for the male sex has risen from 38.1 to 48.85, for the female sex from 42.5 to 54.9. This shows a quite important improvement in the life expectancy of the German people.

Professional Courtesy in Regard to Fees

It is an ancient custom in Germany as in many other civilized countries that physicians receive no fee for their treatment of their colleagues and their families. This tradition, founded on an ideal of professional conduct, has led in the course of time to abuses which are much complained of, both by the colleagues treated and by those called on to treat them. In a signed editorial in the *Deutsche medizinische Wochenschrift* last October, Professor Schwalbe discussed these abuses thoroughly. (A summary of his article was published in The Journal, Nov. 20, page 1785.) He came to the conclusion that the conditions of practice have changed so much that a mutual remission of fees to the medical profession is no longer to be regarded as desirable from a professional standpoint. The treatment of the families of physicians forms at the present time a great part of the work of specialists, who formerly were almost unknown, and those among them who are of moderate means cannot afford to receive for their practice either nothing at all or more or less useless presents like bronzes, vases, pictures, etc. On the other hand, the distinguished physicians whose income might well permit such free treatment are so greatly in demand by German and foreign physicians and their families that their other practice suffers. On the other hand, a considerable number of physicians who require the aid of their colleagues for themselves and their families object to the present custom, for one reason because they are not willing to remain under obligations to physicians to whom they are more or less strangers, and as the consultants are averse to receiving pay on account of professional custom, they hesitate to demand their services and often in this way diseases are neglected. Professor Schwalbe proposed that each physician shall be allowed to decide whether he will demand or pay a fee for the services and that a consultant shall no longer be required on the ground of professional courtesy to refuse to receive a fee offered by a colleague. This position has been endorsed by a number of physicians in letters that have been published in the *Deutsche medizinische Wochenschrift*. What is still more important, the business committee of the Berlin medical professional union (*Standesverein*) which includes the greater part of the Berlin medical profession, a few days ago, after a thorough debate, passed the following resolution: "The acceptance of a fee for the treatment of physicians and physicians' families is not to be considered unethical conduct." Thus the present usage will be gradually abandoned to the benefit of many patients and physicians. In practice the ideal which Professor Schwalbe gave at the end of his article may be established: Physicians who are in friendly relations or closely associated in their work will not mutually recompense each other for treatment by money payment, but the specialist will be justified in requiring a fee from distant, unknown, or foreign physicians and their families. On the other hand, every physician will be permitted to pay the adviser for himself and family in a moderate way, and the consultant need not feel himself obliged on account of professional courtesy to refuse the fee. If the latter regards it unprofessional to use such a fee for himself, he may apply it to some humanitarian purpose. In the estimation of the fee it is to be expected of specialists that they will not require the fancy prices occasionally customary with many of them but at most will settle for a moderate fee.

Infant Mortality in Bavaria

The infant mortality in the kingdom of Bavaria has fallen markedly and somewhat steadily in the last six years; in the years from 1903 to 1908 the deaths of children in the first year corresponding to a percentage of those born living, were respectively 25.0, 23.9, 24.1, 22.7, 22.0 and 21.7. In 1900 the infant mortality was 27.8 and in 1878 29.6 per cent. In 1908 two-thirds died from gastrointestinal catarrh and diarrhea or congenital lack of vitality, 36.8 per cent. from the first cause, and 26.8 per cent. from the second. The infant mortality is extraordinarily high only in certain districts where the custom of artificial feeding of new-born children prevails. The coincidence of a high infant mortality with a high birth rate, noted in Bavaria as elsewhere, is associated with the marked extension of artificial feeding for the reason that the mother who nurses her child does not again become pregnant so soon, and that when the deliveries follow each other so rapidly, the new pregnancy gives the mother no time to recover from the exhaustion of the last delivery. The prince regent of Bavaria has contributed $2,500 (7,000 marks) and the government $12,000 for the advancement of infant hygiene.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, March 12, 1910.

Increase of Smoking and Its Effects on Youths

Two reports giving an interesting insight into the effects of tobacco on the population have been recently published.

The financial report of the budget committee of parliament shows that a constant and rapid diminution of the use of cigars is balanced by an equally constant and rapid increase in the consumption of cigarettes. Pipe-smoking and snuffing are nearly 80 per cent. less than five years ago, while tobacco-chewing is practically unknown here. There were 1,212,060,000 cigars sold in this country in 1908, while 4,348,010,000 cigarettes were consumed at the same time. The population being about 28,000,000, of whom only 9,000,000 can be considered as smokers, this works out a high figure per head.

The other report was made by a medical officer engaged for ten years in recruiting work, who for his private curiosity undertook to observe the effects of smoking on the youths whom he had to examine for the army. His list comprises 4,800 youths, aged from 19 to 24. He finds that in rural districts smoking is much less common, at this age at least. Even then pipes are preferred; smoking is done mostly in the open air. In the town population the cigarette is mostly indulged in, oftener indoors than out in the open; the average age at the beginning of smoking, 17, is about equal in the two groups. Youths in schools (colleges, gymnasiums, universities) are nearly always smokers; at least they pretend to be. Only 5 per cent. of the masculine population of this age are non-smokers. Generally speaking, he could not find any marked effects due to moderate smoking among those whom he examined. Only excessive smoking, especially seen in students before examinations during hard study, brought on neurasthenic symptoms: palpitation, indigestion, sleeplessness, tinnitus aurium. He hardly ever saw such conditions in youths engaged in rural occupations, while apprentices and shop assistants showed similar conditions as those seen in students.

Postgraduate Lectures During Vacations

For a few years postgraduate courses have been organized here with much success. Although they were at first only a private experiment their use has been recognized so universally that they have now become a regular part of the teaching at our general hospital. In order to enable all doctors who desire it to partake of the advantages of the classes, it has been arranged by the Vienna medical council that classes of six to twelve hours, lasting one or two weeks, are given by certain professors alternating every month. The fee is very moderate, $1 or $2 per class, which goes to medical charitable purposes. The subjects of the postgraduate classes of this kind are chosen with a view to inform the doctor who is out of touch with the hospitals about the achievements of modern medicine during the last fifteen years or less. Another group of lectures, called the *Ferialcurse* or vacation course, is delivered during the Easter, Christmas and summer months, lasts at least four weeks and comprises one subject, which is taught as intensively as possible. The fees are much higher, $10 to $20; the classes are held mostly by privat-docents or assistants, and the number of the students is limited. They are open to any qualified man, while the classes conducted by the medical council are open only to Austrian doctors. The number of physicians who made use of the opportunities offered them by the medical council was over 400 last year, and the usefulness is best demonstrated by the number of those who have booked for similar courses for this year.

The Temperance Movement in Austria

The temperance movement is growing in this country steadily, though not too rapidly. The energetic managing board of the "Austrian Antialcohol League" has succeeded in turning public attention to its aims by inducing several well-known men, among them the celebrated Professor Forel from Switzerland, to deliver popular lectures on the subject of the evil influence of alcohol on the development of both the body and the mind.

Already it has been demonstrated that temperance exerts a powerful influence on the capability of the laborer, and in many factories and trades only persons are employed who belong to the abstainers or at least to temperance clubs. There is a medical club of total abstainers. Students of all faculties have formed the students' antialcohol club (a fact much more significant than anything else, for the old unwritten laws and customs of the German students made drinking one of the chief recreations of the university men). In several hospitals a non-alcoholic treatment of diseases has been strictly adhered to, and there is an antialcohol press, whose circulation has exceeded that of many of the political papers.

Among the working classes the knowledge of alcohol, of its questionable value as a food, and its unquestionable effects as disease-producer is widely disseminated by lectures, so that in many circles a true alcoholic boycott is permanently declared and observed by the men.

Pharmacology

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

THE ESTIMATION OF MERCURY IN ORGANIC COMPOUNDS

W. A. Puckner and W. S. Hilpert

[EDITOR'S NOTE: The preparation here referred to, in an indefinite way, was finally accepted by the Council and is now included in New and Nonofficial Remedies, but with a corrected statement as to its actual composition. The matter is published to call attention to one phase of the work of the Council on Pharmacy and Chemistry. In this instance an honorable firm had for a long time been putting out a preparation which the physician was told contained a certain amount of mercury. It matters not whether the manufacturers were innocent or not, the fact was that it did not contain the amount stated, and the physician would therefore be misled on a very important matter. This report also shows another thing, and that is that honest manufacturers are realizing that it is to their interest to comply with all legitimate demands regarding statements, whether they relate to the actual composition of a product or to its therapeutic value.]

Under a proprietary name there has been on the market for some time a preparation containing a protein compound of mercury, combined with other material. The preparation was submitted to the Council on Pharmacy and Chemistry and the manufacturers gave a chemical formula for the protein compound of mercury which indicated that the mixture should contain 6.57 per cent. of mercury.

At the request of the Council, the preparation was examined in the Association laboratory. The identity of the contents of the mixture was verified by qualitative tests, but a quantitative examination showed that the preparation instead of containing 6.57 per cent. of mercury really contained only 4.27 per cent. The method of examination was that of Kjeldahl. The material was decomposed by sulphuric and nitric acids and the mercury determined as sulphid.[1]

The attention of the manufacturers was called to the result of the examination and they were also given the method used. In reply they questioned the findings and held that the method used was faulty, and proposed a method[1] which differs from the one used in the Association laboratory only in that potassium sulphate was added to the sulphuric acid in place of nitric acid. This method was then employed with the result that in two analyses the mercury compound yielded mercuric sulphid equivalent to 4.40 per cent. of mercury. This showed such a slight increase in the mercury content indicated by the first examination as to be negligible.

As a further check on the method determinations[1] were made according to the method of Schumm in which the organic matter is decomposed by the action of concentrated hydrochloric acid and potassium chlorate and the mercury estimated as sulphid, with the result that the compound yielded mercuric sulphid equivalent to 4.23 per cent. of mercury. Confirmation of the laboratory's findings by their own method having been reported to the manufacturers, they were accepted by them as correct.

The discrepancy between the claims made for a product and the facts established by analysis which were brought out by the examination detailed above furnishes a good illustration of the lack of control exercised in the manufacture of medicinal products and the loose manner in which chemical formulas are applied to substances which are of indefinite, variable composition or which are highly impure. This can be explained in this instance by a lack of cooperation between the scientific staff of the manufacturers and those in charge of the commercial department.

There is no reason for the assumption that the manufacturers knowingly misrepresented the composition of the preparation. On the contrary, they have courted investigation of their products. Thus, when they submitted to the Council the preparation referred to, they voluntarily presented specimens of the constituents so as to facilitate investigation.

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[1] The details of analysis will be published in the annual report of the laboratory.

The Composition of Manola

Inquiries have been received relative to the composition of Manola, a preparation manufactured by the "Manola Company," said to be a subsidiary concern of the Luyties Homeopathic Pharmacy Company, St. Louis.

Examination of Manola in the Association laboratory indicates that its composition is consistent with its origin, for its medicinal ingredients are present in truly homeopathic quantities. The laboratory report follows:

An examination of an original bottle of Manola gave the following results:

Specific gravity at 25 C........	1.0329
Alcohol	18.00 per cent. by vol.
Non-volatile matter (residue on evaporation)	15.93 gm. in 100 c.c.
Ash	.96 gm. in 100 c.c.
Phosphoric pentoxid (P_2O_5).....	.0668 gm. in 100 c.c.
Total alkaloids	.0047 gm. in 100 c.c.
Calcium	Traces.
Magnesium	Traces.
Iron	Traces.
Sodium	Traces.
Arsenic	Traces.

Manola is a light amber colored liquid having the odor and taste of sherry wine. The above analysis indicates that it is nothing more than wine, fortified with alcohol and a slight amount of medicinal substances added. The non-volatile matter appears to be nearly all sugar, glycerin, or some similar substance and the presence of less than one gram of ash to 100 c.c. excludes the presence of more than a small amount of organic salts. From the amount of phosphorus found there appears to be about one dose of phosphoric acid to a twenty-ounce bottle. Arsenic is present in such small amounts that the ordinary hydrogen sulphid test failed to show its presence and the delicate Gutzeit's test had to be used to detect it.

Some interesting points in regard to the methods of the exploiters of Manola appeared in THE JOURNAL, Aug. 8, 1908, p. 511; Dec. 19, 1908, p. 2172, and have been reprinted in the "Propaganda for Reform."

Correspondence

Views on the Present Organization by the "Father of the Association"

To the Editor:—I have been reading your editorials on the organization of the Association with great interest and satisfaction. I am sure if you will search old speeches made by my father, by Gross, and by others of the old guard, you will find the hope frequently expressed that ultimately the profession of the country would be so organized that every county would have its society and send delegates to a business body of the state society, and that every state society would, in like manner, be represented in the Association—in other words, the organization as it now exists. That this was my father's ideal I know from his frequently repeated expressions to that effect.

Moreover, what may please you was his feeling of gratification when the reorganization was effected that such a representative organization was possible. He also commented on the similarities of function of the council and the business committee, or business council as his committee planned it for adoption, a reform which was adopted and later tabled on a parliamentary technicality, as is stated in your editorial.

N. S. DAVIS, Chicago.

[Dr. Davis merely emphasizes what the records of the Association show and what the older, active members of the Association know—that the general plan of organization, as is now in active operation, was the ideal that for long had been suggested, and especially by Dr. Davis, the "Father of the Association." This is shown in the "argument" accompanying the report of the Organization Committee, presented to the St. Paul meeting in 1901.—ED.]

Arrest of Paroxysms in Whooping Cough

To the Editor:—The following simple method has arrested the paroxysms of whooping-cough in a number of patients in from 3 to 7 days, and has also succeeded in some cases of laryngismus stridulus.

Place a pleximeter on the spinous process of the seventh cervical vertebra and strike the pleximeter a series of moderate blows with a percussion hammer. The number of blows is of little moment but the blows must be as strong as the child can tolerate without flinching. Some of the mothers accompany the blows with a nursery rhyme or song to interest the child. In the absence of a pleximeter and percussion hammer, a strip of linoleum and a tack hammer will suffice. To avoid cutaneous irritation, cotton may be interposed between the linoleum, or pleximeter and the spine. Each seance during the interparoxysmal period should last five minutes thrice daily and the harmless method may be executed by the mother or nurse. I am desirous of collecting reports on this method of treatment; to test the efficiency of the treatment, it would be well to note the number and severity of the paroxysms before and after treatment in each patient.

Albert Abrams, M.D., San Francisco.

246 Powell Street.

The Kentucky Medical Bill

To the Editor:—In The Journal, March 19, an item from your Kentucky correspondent is misleading in that it states that the cause of the failure of the bill was the statement made by Senator Linn in opposition to the bill that "the consolidation of the five medical colleges of Louisville resulted in a number of men losing their positions and this bill was the outcome of the ill-feeling resulting therefrom."

Senator Linn was the political leader of the senate, and was simply following the dictates of the powerful influence brought to bear on him by the so-called University of Louisville, which has fought higher medical education all the time.

This bill was the result of a petition endorsed unanimously last October by the State Medical Association urging the state to establish a medical department of the State University as a necessity for higher and better medical education. It was drawn by President Patterson and his associates of the state university at Lexington. It was a bill that should have passed, and will pass unquestionably at the next legislature.

The bill was not defeated by a vote of eighteen to fourteen, as stated by your correspondent, but it was defeated, after receiving eighteen to fourteen votes in its favor, by a constitutional amendment requiring all bills carrying an appropriation to have twenty votes, of which we lacked two owing to sickness on that day of two of our champions for the bill in the senate.

W. F. Boggess, Louisville, Ky.

[We have received two other protests similar to the above. The item referred to and quoted should not have appeared in The Journal, regardless of whether or not the assertion of Senator Linn was based on fact.—Editor.]

Association News

TRUSTEES' MEETING

Report of Regular Meeting of the Board of Trustees of the Association

The Trustees of the American Medical Association met in Chicago, Feb. 4 and 5, 1910, at the rooms of the Association. Two sessions were held on February 4 and one on February 5. There were present at all sessions:

Dr. M. L. Harris, Chicago (Chairman).
Dr. Philip Marvel, Atlantic City, N. J. (Vice-Chairman).
Dr. Wisner R. Townsend, New York (Secretary).
Dr. Philip Mills Jones, San Francisco.
Dr. W. T. Councilman, Boston.
Dr. W. T. Sarles, Sparta, Wis.
Dr. C. E. Cantrell, Greenville, Texas.
Dr. C. A. Daugherty, South Bend, Ind.

FIRST SESSION, HELD FROM 10:15 A. M. TO 12:30 P. M.

A letter from Dr. W. W. Grant, Denver, was read, in which he stated that he was unable to be present and expressed his regret.

It was moved to dispense with the reading of the minutes of the last meeting, as they had been read and approved.

The Editor and General Manager read his annual report. The recommendations contained therein, for new machinery, were duly considered.

Dr. Sarles moved, Dr. Cantrell seconded, that a new covering machine to cost $3,500 be ordered. Carried.

Dr. Jones moved, Dr. Cantrell seconded, that a new rotary press to cost $18,000 be ordered. Carried.

Dr. Jones moved, Dr. Sarles seconded, that a new book sewing machine to cost $1,350 be ordered. Carried.

A request from Dr. W. B. Cannon was read, asking for an additional appropriation of $500 for the Committee on the Defense of Medical Research.

A request was also presented for an appropriation of $850 for the Council on Pharmacy and Chemistry.

Dr. Charles A. L. Reed presented a request for an additional appropriation for the use of the Committee on Medical Legislation, and made an argument in favor of the same, giving details as to what had been done so far toward the establishment of a bureau of health and what work was necessary in the future. Dr. Cantrell moved, Dr. Marvel seconded, that the request of Dr. Reed for an additional appropriation of $1,250 for the expenses of the Committee on Medical Legislation, from February 7 to June 12, be allowed, and an additional contingent fund of $2,000 be placed at the disposal of the committee, with the proviso that it can only be spent for work done by the committee itself. Carried.

SECOND SESSION, HELD FROM 2:30 P. M. TO 6 P. M.

The minutes of the morning meeting were approved.

Dr. Jones moved, Dr. Cantrell seconded, that the plan of publicity campaign advocated by Dr. F. B. Wynn, chairman of the Committee on Scientific Work, be received and placed on file. Carried.

Dr. Jones moved, Dr. Councilman seconded, that Drs. F. G. Novy, G. H. Simmons and H. W. Wiley be declared elected to the Council on Pharmacy. Carried.

Dr. Jones moved, Dr. Marvel seconded, that the Board of Trustees again call the attention of all officers of the Association and all heads of committees to the necessity of presenting to the Board of Trustees an annual budget, and request that all expenses be kept within the appropriations made. Carried.

Dr. Councilman moved, Dr. Jones seconded, that an additional $500 be appropriated to the Committee on Defense of Medical Research. Carried.

Drs. I. Abt and F. S. Churchill, on behalf of a number of pediatrists, presented a communication requesting the publication, by the Association, of a journal devoted to pediatrics. Dr. Jones moved, Dr. Sarles seconded, that a committee of eleven be appointed by the chairman to secure information for the Trustees in regard to the publication by the American Medical Association, of a journal devoted to pediatrics. Carried. The chairman appointed Drs. I. Abt of Chicago, chairman, and Drs. A. Jacobi, L. E. Holt, Thomas Southworth and G. Pisek of New York, T. M. Rotch of Boston, E. E. Graham and J. P. C. Griffith of Philadelphia, W. J. Butler, J. M. Dodson and F. S. Churchill of Chicago.

Dr. Jones moved, Dr. Sarles seconded, that bill of Dr. McCormack, $842.40, for expenses from July 23 to February 5, be paid. Carried.

Dr. Jones moved, Dr. Councilman seconded, that the $850 requested by the Council on Pharmacy and Chemistry be granted. Carried.

A letter of the lawyers in regard to the status of the American Medical Association Public Health Education Committee of Women was read and ordered spread on the minutes. Dr. Marvel moved, Dr. Daugherty seconded, that the communication received from the chairman of the committee be acknowledged by the chairman of the board. Carried.

Drs. Bracken, Evans and McCormack then appeared before the Board and presented a communication relating to the establishment of a Bureau of Legislation, Organization and Publicity. Dr. Cantrell moved, Dr. Sarles seconded, that the chairman appoint a committee of two from the Trustees, to meet with Drs. Bracken, Evans, Reed, McCormack, Clark and Price (previously appointed by the House of Delegates) to prepare a plan for the formation of this council and to suggest the necessary changes in the Constitution and By-laws to carry the plan into effect, and that this committee report to the Board of Trustees prior to the meeting in St. Louis. Carried.

THIRD SESSION, FEBRUARY 5, HELD FROM 10 A. M. TO 12:45 P. M.

Dr. Sarles moved, Dr. Cantrell seconded, that the chairman be made a member of the committee to devise plans, etc., for the Council on Legislation, Organization and Publicity. The chairman then appointed as members of the committee, from the Trustees, Drs. Harris and Cantrell. Carried.

A report from the Committee on Refraction by Dr. Connor was read and ordered placed on file.

A request was received from Dr. A. D. Bevan and others asking that the Association publish a journal devoted to surgery. Dr. Jones moved, Dr. Councilman seconded, that a committee of eleven be appointed by the chairman to secure information for the Trustees in regard to the publication, by the American Medical Association, of a journal devoted to surgery. Carried. The chaiman appointed Dr. A. D. Bevan of Chicago, chairman, and Drs. J. F. Binnie, Kansas City, Kan.; J. C. Bloodgood, Baltimore; George E. Brewer, New York; George W. Crile, Cleveland, Ohio; A. F. Jonas, Omaha; Rudolph Matas, New Orleans; W. J. Mayo, Rochester, Minn.; J. G. Mumford, Boston; Charles A. Powers, Denver; and Emmett Rixford, San Francisco.

A report from the Committee on Ophthalmia Neonatorum was then read. Dr. Jones moved, Dr. Cantrell seconded, that the report be accepted and the committee thanked for its excellent work. Carried.

Dr. Harris reported progress as a member of the Committee on Postal Relations.

Dr. Jones moved, Dr. Councilman seconded, that Dr. George H. Simmons be reelected Editor and General Manager for the ensuing year. Carried.

There being no further business, the minutes of the meeting were read and approved and the Board of Trustees adjourned *sine die* at 12:45 p. m.

M. L. HARRIS, Chairman.
WISNER R. TOWNSEND, Secretary.

HOTELS AT ST. LOUIS

Rates, Locations and Capacities of Hotels for the St. Louis Session

Members of the American Medical Association desiring to secure hotel accommodations should write to the chairman of the Hotels Committee, Dr. Louis H. Behrens, 609 Metropolitan Building, or direct to the hotels. Many reservations have already been made and prompt attention should be given to this matter in order to secure accommodations in advance.

When writing, please give definite instructions as to the character of rooms desired, whether with or without bath, European or American plan, number of people in the party, and particularly the names of persons who are willing to share rooms.

As the section meeting places are located along Grand avenue, which is a thoroughfare about midway between the east and west ends of the city, the hotels are listed according to their location, and the time consumed in riding to the meeting-places is mentioned.

The first list comprises those hotels located in the downtown, or east, section of the city:

AMERICAN HOTEL, Seventh and Market Sts., 275 rooms, all with bath; can take 350; rate, one person, $1.50 and up; additional, $1 per person; 15 minutes from meeting place.

EDISON HOTEL, 107 N. Eighth St., 12 rooms; can take 24; rate, one person, $1; additional, $1 per person; 15 minutes from meeting place.

HOTEL GARNI, Jefferson and Olive Sts., 50 rooms; can take 50; rate, one person, $0.75 and up; additional, $0.50 per person; 8 minutes from meeting place; near Coliseum.

JEFFERSON HOTEL, Twelfth and Locust Sts., 400 rooms; can take 300; rate, one person, $1.50 and up; with bath, $2.50 and up; additional, $1 per person; *with bath, $1.50 per person*; 8 minutes from meeting place.

LACLEDE HOTEL, Sixth and Chestnut Sts., 170 rooms; can take 150; rate, one person, $1 and $1.50; with bath, $2 to $2.50; additional, $1 per person; 15 minutes from meeting place.

MADISON HOTEL, Broadway and Chestnut St., 112 rooms; can take 100; rate, one person, $1 and up; additional, $0.75 and up; 15 minutes from meeting place.

MARQUETTE HOTEL, Eighteenth and Washington Ave., 400 rooms; can take 250; rate, one person, $1.50 and up; with bath, $2 and up; additional, $1 per person; 8 minutes from meeting place.

MARYLAND HOTEL, Ninth and Pine Sts., 240 rooms; can take 200; rate, one person, $1 to $2; with bath, $2 to $2.50; additional, $1 per person; 10 minutes from meeting place.

MOSER HOTEL, 809 Pine St., 100 rooms; can take 75; rate, one person, $0.75 and $1; additional, $0.75 per person; 10 minutes from meeting place.

PLANTERS HOTEL, Fourth and Pine Sts., 440 rooms; can take 300; rate, one person, $1.50 and up; with bath, $2.50 and up; additional, $1 per person; *with bath, $1.50 per person*; 15 minutes from meeting place.

PORTLAND HOTEL, 1817 Market St., 100 rooms; can take 100; rate, one person, $1; additional, $0.75 per person; 10 minutes from meeting place.

ROZIER HOTEL, Thirteenth and Olive Sts., 120 rooms; can take 180; rate, one person, $0.75 to $1.50; additional, $0.75 per person; *8 minutes from meeting place.*

ST. JAMES HOTEL, Broadway and Walnut, 150 room; can take 200; rate, one person, $1.50; with bath, $2; additional, $1 per person; with bath, $1.50 per person; 15 minutes from meeting place.

ST. NICHOLAS HOTEL, Broadway and Market, 40 rooms; can take 25; rate, one person, $0.75 to $1; additional $0.50 per person; 15 minutes from meeting place.

SOUTHERN HOTEL (General Headquarters), Broadway and Walnut, 400 rooms; can take 200; rate, European plan, one person, $1.50 and up; with bath, $2.50 and up; American plan, one person, $3.50 and up; with bath, $4 and up; additional, European plan, $1.50 and up per person; American plan, $3.50 and up per person; 15 minutes from meeting place.

STRATFORD HOTEL, Seventh and Pine Sts., 100 rooms; can take 150; rate, one person, $1; with bath, $1.50; additional, $0.50 per person; 15 minutes from meeting place.

TERMINAL HOTEL, Union Station, 110 rooms; can take 150; rate one person, $1.25 and up; with bath, $2.50 and up; additional, $1.25 per person; 10 minutes from meeting place.

The following hotels are located in the west end, or residence section, of the city:

BEERS HOTEL, Grand and Olive, can take 40; rate, one person, $1 and up; with bath, $2.50, and up; additional, $1 per person; at meeting place.

BUCKINGHAM HOTEL, Kingshighway and West Pine, can take 100; rate, one person, European plan $1.50; with bath, $2.50; additional, $1 per person; *rate, one person, American plan $3*; with bath, $4; additional, $2.50 per person; 10 minutes from meeting place.

HAMILTON HOTEL, Hamilton and Maple Ave., 150 rooms; can take 50; European plan, rate, one person, $1; with bath, $1.50; additional, $1 per person; American plan, one person, $2; with bath, $2.50; additional, $1.50; 15 minutes from meeting place.

HOTEL BERLIN, Berlin and Taylor Ave., can take 25; American plan, rate, one person, $1.50; with bath, $2.50; additional, $1 per person; *10 minutes from meeting place.*

USONA HOTEL, Kingshighway and McPherson, 100 rooms; can take 50; American plan, rate, one person, $2.50; with bath, $3; additional, $1.50 per person; with bath, $2 per person; 10 minutes from meeting place.

WEST END HOTEL, Vandeventer and W. Belle, can take 25; rate, one person, $1 and up; with bath, $1.50 and up; additional, $1 and up; *5 minutes from meeting place.*

WESTMORELAND HOTEL, Maryland and Newstead Ave., can take 50; all rooms with bath; rate, one person $2; *additional*, $1 per person; 8 minutes *from* meeting place.

WINDERMORE HOTEL, 5601 Delmar Blvd., American plan only; can take 25; rate, one person, $1.50; with bath, $2.50; additional, $1 per person; 15 minutes from meeting place.

PRIVATE HOMES AND BOARDING HOUSES

In addition to the hotels listed there are numerous private homes and boarding-houses on and near Grand avenue, in close proximity to the section meeting-places, where good accommodations can be secured at rates ranging from 75 cents to $1.50 a day, American plan. Those who desire to obtain such accommodations should write to the chairman, Hotels Committee, at the address given above. State clearly what accommodations are desired, for how many people, and at what rate per day.

SECTION HEADQUARTERS

Hotel headquarters for sections have been assigned as follows:

SECTIONS	HOTELS
General Headquarters	Southern Hotel
Surgery	Jefferson Hotel
Dermatology	Jefferson Hotel
Laryngology and Otology	Jefferson Hotel
Practice of Medicine	Planters Hotel
Pathology	*Planters* Hotel
Pharmacology and Therapeutics	Planters Hotel
Ophthalmology	Marquette Hotel
Obstetrics and Diseases of Women	Marquette Hotel
Diseases of Children	Marquette Hotel
Nervous and Mental Diseases	Buckingham Hotel
Preventive Medicine	Buckingham Hotel
Stomatology	West End Hotel

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

UTILIZATION OF GARBAGE IN SUPPLYING POWER FOR WATERWORKS, ETC.

To the Editor:—Can you furnish data concerning the utilization of city refuse, such as garbage and old paper, for supplying power for waterworks and other municipal plants, or tell me where such data can be obtained? STEPHEN C. MASON, JR., Menominee, Mich.

ANSWER.—The economical disposal of garbage and refuse in cities and towns is an engineering as well as a sanitary problem of no small importance, and has been the subject of a great deal of study and experiment. It cannot be said that a practical and economical solution has yet been evolved. In many cities, such refuse has been made a source of revenue to the extent of paying a part of the expense of disposal, but nowhere in this country has it been successfully utilized in the way of fuel for running city plants to the extent named in the inquiry. In Great Britain more success has been attained in this respect, but it is said that such waste contains more combustible material than in this country. In Boston and in New York, and perhaps in some other cities in the United States, incinerators have been established which dispose of a part of the waste. After it is picked over by contractors who pay certain sums for the usable material they can get from it, the residue is burned, sufficient heat being produced to furnish steam for running a belt conveyor and perhaps baling presses. One incinerator under the Williamsburgh bridge in New York also furnishes enough heat to make electric light for lighting the bridge. The proximity of the water in the boilers of steam plants seems to cool the fire so that combustion is not perfect even under forced draft, and if the boilers are placed far enough away from the fire box to overcome this difficulty much of the heat is lost. In many cities and towns where incinerators and plants for the utilization of the waste for power purposes have been established they have later been abandoned and other methods of disposal adopted.

The following references may be consulted:

Chapin: Municipal Sanitation in the United States, The Providence Press, Providence. R. I.. 1901.

Goodrich: Disposal of Town Refuse, Wiley, New York, 1901.

Baker: Municipal Engineering and Sanitation, Macmillan Co., New York, 1902.

THE JOURNAL, July 3, 1909, p. 43, in an article in Queries and Minor Notes, gives further references.

The Public Service

Medical Department of the Army

Changes for the week ended March 26, 1910:

Taylor, Blair D., col., ordered to make an inspection of the Medical Department, and a sanitary inspection of Key West Barracks, Fla., Forts Dade and De Soto, Fla.

Bryan, Ray W., lieut., granted 2 months' leave of absence,

Jordan, Edward H., 1st lieut., M. R. C., orders to Fort Ward, Wash., revoked; relieved from active duty in the Medical Reserve Corps, to take effect on expiration of leave of absence granted him for 1 month and 1 day.

Ruffner, Ernest L., major, on arrival at San Francisco, to proceed to Fort Missoula, Mont., for duty.

Thomason, Harry D., capt., relieved from duty at Fort Missoula, Mont., and will repair to this city and report in *person to the* Chief of the Division of Militia Affairs, War Department, for duty in his office.

Wales, Philip G., major, ordered to proceed from Presidio of Monterey, to the Army General Hospital, San Francisco, for observation and treatment.

Johnson, Charles W.. 1st lieut., M. R. C., relieved from duty at Fort Des Moines, Iowa, and will proceed to his home, and on arrival there will report by telegraph to The Adjutant General of the Army, for further orders.

[illegible] major, ordered to report in person to [illegible] m P. Hall, Adjutant General, President, [illegible] ıshington, D. C., at such time as he may [illegible] by the board.

[illegible] major, on expiration of present leave of absence, directed to proceed to Manila, P. I., for duty on transport sailing from San Francisco, about May 5, 1910.

Raymond, H. I., lieut. col., will stand relieved from duty as Chief Surgeon, Headquarters, Department of Dakota, March 24, 1910, to enable him to comply with orders for the Philippine Islands.

Pulver, Arthur L., 1st lieut., M. R. C., ordered to proceed from Fort Porter to Fort Wadsworth, N. Y., for temporary duty.

McCallum, F. M., 1st lieut., M. R. C., honorably discharged from the service of the United States.

Tukey, William H., 1st lieut., M. R. C., orders to duty in the Philippine Islands, revoked; relieved from duty at Boise Barracks, Idaho, and will proceed to his home.

Public Health and Marine-Hospital Service

Changes for the week ended March 23, 1910:

Stoner, G. W., surgeon, granted 16 days' leave of absence from March 24, 1910.

Mead, F. W., surgeon, directed to proceed to Georgetown, S. C., on special temporary duty.

White, J. H., relieved as chairman of board of medical officers convened to meet April 4, 1910.

Carrington, P. M., surgeon, directed to proceed to San Francisco, on special temporary duty.

McIntosh, W. P., surgeon, detailed to represent the service at the meeting of the Association of American Medical Colleges, to be held in Baltimore, March 21-22, 1910.

Wickes, H. W., P. A. surgeon, relieved as recorder and detailed as chairman of board of medical officers convened to meet April 4, 1910.

Von Ezdorf, R. H., P. A. surgeon, leave of absence granted Jan. 19, 1910, amended to read 1 month and 6 days from Jan. 15 and 20 days from March 10, 1910.

Korn, W. A., P. A. surgeon, granted 2 days' leave of absence from March 22, 1910.

Pettyjohn, Joseph, P. A. surgeon, detailed as recorder of board of medical officers convened to meet April 4, 1910.

Hotchkiss, S. C., asst.-surgeon, granted 1 day's leave of absence in February, 1910, under paragraph 191, Service Regulations.

Dynan, N. J., acting asst.-surgeon, granted 4 days' leave of absence from Feb. 28, 1910, under paragraph 210, Service Regulations.

McKay, W. W., acting asst.-surgeon, granted 30 days' extension of leave from Feb. 5, 1910, on account of sickness.

Walkley, W. S., acting asst.-surgeon, granted 3 days' leave of absence from March 29, 1910.

Board of medical officers were convened to meet on April 4, 1910, for the purpose of making physical examinations of applicants for the position of cadet in the Revenue-Cutter Service, as follows: [illegible] Surgeon C. H. Gardner, chairman; Acting [illegible] D. MacMillan, recorder. Milwaukee, Wis., [illegible] chairman; Acting Assistant-Surgeon C. H. Stoddard, recorder.

Board of medical officers convened to meet at Boston, for the purpose of reexamination of an alien. Detail for the board: Passed Assistant Surgeon T. W. Salmon, chairman; Acting Assistant-Surgeon M. V. Safford; Acting Assistant-Surgeon H. B. C. Riemer, recorder.

Society Proceedings

COMING MEETINGS

Alabama, Medical Association of State of, Mobile, April 19-22.
Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Sc [illegible] May 3-5.
American Laryngological [illegible] D. C., May 3-5.
Am. Laryn., Rhin. and Otc [illegible] . C., April 28-30.
Amer. Medico-Psychological Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American Ophthalmological Society, Washington, D. C., May 3-4.
American Orthopedic Association, Washington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Arizona, Medical Association of, Phoenix, April 20-21.
Association of American Physicians, Washington, D. C., May 3-5.
California, Medical Society of State of, Sacramento, April 19-21.
Conf. State and Prov. Bds. of Health, Washington, April 28-29.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
District of Columbia, Medical Association of, Washington, April 26.
Florida, Medical Association of, Jacksonville, April 6-8.
Georgia, Medical Association of, Athens, April 20-23.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Maryland, Med. and Chirurgical Faculty of, Baltimore, April 26-28.
Mississippi State Medical Association, Oxford, April 12.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Association, Hunter's Hot Springs, May 11.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
South Carolina Medical Association, Laurens, April 19-21.
Tennessee State Medical Association, Memphis, April 12-14.
Texas, State Medical Association of, Dallas, May 10-12.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Twentieth Annual Meeting, held at Baltimore, March 21-22, 1910

DR. GEORGE HOWARD HOXIE, University of Kansas, the President, in the Chair

Officers Elected

The following officers were elected: President, Dr. J. A. Witherspoon, Vanderbilt University; vice-presidents, Dr. Horace D. Arnold, Tufts College Medical School, and Dr. Charles R. Bardeen, University of Wisconsin; secretary-treasurer, Dr. Fred C. Zapffe, University of Illinois, reelected;

judicial council, Drs. William J. Means, Starling-Ohio Medical College, Randolph Winslow, University of Maryland, and J. R. Guthrie, University of Iowa.

Amendments Adopted

The following amendments to the Constitution were adopted:

Article III, *Section* 1 (b): For the present Latin requirement of 2 years (4 points), there may be substituted 4 years of either high-school French or German, or its full equivalent, provided a satisfactory examination is passed in the elements of Latin grammar.

Article III, *Sec. 5:* Each annual course must be of not less than 32 weeks' duration instead of 30 weeks, as heretofore. This time includes examination periods, but does not include any vacation period. It was estimated that about 2 weeks would be consumed by examinations, leaving 30 actual teaching weeks, and on this basis the new curriculum is established.

Article III, *Sec. 13:* No college a member of this Association will be permitted to employ a paid solicitor for the purpose of inducing the attendance of students, nor shall any college offer to anyone, either directly or indirectly, any reward or inducement for securing the attendance of students.

Article III, *Sec. 1* (c): The university matriculation certificate of the Association of American Universities may be accepted as a minimum requirement for admission.

President's Address: Medical Standards; Medical Pedagogics

Dr. George Howard Hoxie, Kansas: The membership of the association is determined by a curriculum standard; it would be unwise to raise that standard beyond the reach of any school in membership; on the other hand, the legislatures of several states have adopted this standard. Schools of medicine are designed primarily for the education of practitioners of medicine. So-called research work must take a subordinate place in the average medical school. The average quality of the profession would be raised, however, by decreasing the number of practitioners. The ultimate standard will be 8 years of primary and grade schools, 4 years of high-school, 2 years of college, 4 years in a medical school, and 1 year in a large, well-regulated hospital. A boy entering the primary school at the age of 6 will be ready to begin the practice of medicine at 25, a mature age. Inquiry among the colleges in membership elicited the fact that the two-year college entrance standard seems to be the ultimate goal.

As to the length of the course, there was some difference of opinion as to whether this should be 4 or 5 years. One way out of the difficulty would be to have 2 degrees in medicine, as is now true of engineering, bachelor of medicine and doctor of medicine. To adopt the international standard as a minimum at this time would be disastrous. Medical education in America is as yet in a chaotic state. We are in a transition period, when the forms and methods of work are being differentiated and crystallized. To make the association national in scope we must not limit our membership by setting up standards that cannot be reached by some sections of our country. In other words, we must have a minimum rather than an ideal standard. It would be wiser to base standards of membership on the quality of work done in the schools and the character of the men who dictate the policy of the schools rather than on the quantitative standards. Does the school demand as high standards as its environment will permit? Does it make the most out of the material given? Furthermore, we cannot go forward more rapidly than the people and the state governments are ready to support us. The student who has had the broad training that includes the humanities as well as the sciences may lack some of the knowledge of the details of technic possessed by those who study only the sciences, but he will have the freshness and eagerness for work and a perspective that will more than compensate, even while in the medical school, for their lack. I would urge that the preliminary college years now being added to our courses be directed toward making men rather than artisans; that the languages, philosophy and the arts be given a proportionate place in their curriculum.

It seems wiser not to take radical action at this time on standards, but to continue our present standard. I believe that the association is concerned not so much with the legal and economic aspects of medical education, as with its pedagogics. We should not give so many hours of study that the students will be physically exhausted, nor should we give so much mental labor that the students become stale. Many medical schools do not require preparation for their class exercises. We should define our standards more carefully. An hour should mean a class exercise and therefore we should make clear in our statement whether the hours enumerated are total hours of study or simply hours of classroom exercise. The curriculum can be improved by giving attention to the law of variety and monotony. Each day the student should have exercises of sufficient variety to excite his attention, but not so many as to dull his interest. I would suggest that we try to arrange our clinical curriculum along the line of the three great branches of practice: medicine, surgery and obstetrics and gynecology. The clinical laboratory should not be a separate department, but a phase of the work in all the departments mentioned. The curriculum of the clinical department must center about the hospital. No school of medicine is adequate for present-day needs unless it is possessed of a hospital of its own. Clinical teaching should be practical and not irrelevant. I would suggest that we work in harmony with other organizations now interested in medical education; that we take their suggestions and recommendations and examine them in the light of our own experience, and in the light of pedagogics.

Report of Secretary

Dr. Fred C. Zapffe, Chicago: The present membership of the association numbers 51, and cannot be increased very materially because of apparent ineligibility. The Council on Medical Education of the American Medical Association placed in its acceptable list 68 colleges. The work the council is doing is of the very greatest importance in its particular sphere, and thorough and hearty cooperation between the council and this association is greatly to be desired. To further such cooperation, I would suggest that the next annual meeting of the association be held in conjunction with the annual conference of the council, in Chicago, or elsewhere, as may be decided later. By a constitutional provision, this association must hold its meeting on the third Monday in March, but it is probable that the council is in a position to shift its time of meeting.

(To be continued)

MEDICAL SOCIETY OF THE MISSOURI VALLEY

Twenty-second Semi-Annual Meeting, held at Omaha, March 17-18, 1910

(Concluded from page 1075)

Should Operation for Ruptured Tubal Pregnancy Be Immediate or Deferred?

Dr. John E. Summers, Omaha: In the majority, say about 95 per cent., of cases of ruptured tubal pregnancy, no operation should be done until reaction from the shock of rupture has taken place. In the remaining 5 per cent. of these cases no delay is permissible. The urgency for operation can be recognized in most patients by the differences in the initial symptoms. In borderline cases the same rules of recognition apply. A differentiation must be made between hemorrhage and shock, immediate and recurring.

DISCUSSION

Dr. B. B. Davis, Omaha: I have done many of these operations; many of these patients will go through the original hemorrhage and shock and will rally and be in a much better condition for operation than at the beginning of the hemorrhage. For a long time I took the position that ruptured tubal pregnancy ought to be operated on at once, but for the last two or three years I have delayed operation for at least a few hours.

Dr. O. Beverly Campbell, St. Joseph, Mo.: I believe that every case of ruptured ectopic gestation is a law unto itself, and the judgment of the surgeon should be used. In many of these cases, delay in operating is indicated. My experience has been that in most cases a blood clot will form and hemorrhage cease, and that we should wait until shock has passed off and the patient has reacted before operating.

DR. DONALD MACRAE, Council Bluffs, Iowa: I am not in a position to differentiate between one case and another, and to say that this patient is or is not in a serious condition, and so in cases of ruptured tubal pregnancy I am going to operate as soon as I can, as I do not know which case is going to terminate fatally, and which is not.

The Physical Basis of Mental Disease

DR. FRANK P. NORBURY, Hospital, Ill., delivered the oration in medicine, and, among other things, said:

The interrelationship of mind and body will ever be a fruitful field for discussion, and may never be solved to the satisfaction of all, but the time is coming, and is not far distant, when the somatic will have precedence over purely mental symptoms. Our therapeutics must and will be adjusted to meet the conditions as they are, not as they are supposed to be.

Local Anesthesia

DR. LEONARD FREEMAN, Denver, delivered the oration in surgery. He referred to the early history of chloroform and ether and the dangers attending the administration of these anesthetics. Nervous and hysterical patients are not suitable for local anesthesia. The patients, he said, must be selected with care and the surgeon must consider age, temperament, nervous control of the individual, etc. Among the operations which can be done under local anesthesia he mentioned the removal of tumors of the scrotum, castrations, epididymectomies, varicocele and hydrocele operations.

Rapid and Complete Cure of Gonorrhea

DR. THOMAS M. PAUL, St. Joseph, Mo.: A cure is not complete unless it results in the absolute eradication of gonococci from the genito-urinary tract, and such a cure can never be rapid in the sense in which that term is used by the laity.

Why the Indifference of the Profession to Morphinism Should Be Changed

DR. S. GROVER BURNETT, Kansas City, Mo., described three types: 1. Simple morphinists belong to the better class of mentalities. They inherit or acquire a tendency to nerve weakness by exhaustive taxations of nerve energy. The drug is taken to relieve physical and exhaustive nerve discomfort. 2. Morphinomaniacs are lower in intellectual stability and acquirements. The inherited weakness of nerve and mind energy is the rule, and a predisposition to add acquired exhaustive states is strong. The drug is taken to relieve exhaustive psychic pain, mind pain, mind discomforts. The action of the drug is to cause further mind deterioration in a mind already near the borderline of insanity. 3. Delusional or motiveless morphinists are sufficiently over the borderline of insanity to cause them to take the drug because of faulty mind, delusional states. The condition is apt to end in a terminal insanity.

Treatment of Localized Appendicular Abscess

DR. VAN BUREN KNOTT, Sioux City, Iowa: The removal of the appendix at a secondary operation is frequently difficult because of the density of the surrounding adhesions and in the majority of instances it will be found much easier to remove it at the first operation; and this should be done rather than subject the patient to a prolonged and often serious operation. The incision is invariably made through the right rectus muscle, splitting the fibers and the peritoneal cavity freely open. A small gauze pack is tucked into the upper angle of the wound and so adjusted as to prevent any extravasation of pus toward the liver or diaphragm. Another small pack is tucked in toward the median line from the upper angle of the wound to the lower pelvis to prevent any extravasation toward the left. The abscess cavity is then freely opened with the fingers, unless opened by the peritoneal incision, and the pus is rapidly mopped up with gauze sponges. The appendix is then exposed and removed. All adhesions separating the abscess cavity from the lower pelvis are freely separated and the pus or seropus, which is usually found in the lower peritoneal pouch, is rapidly mopped up with sponges. A large split rubber tube, from one-half inch to one inch in diameter and carrying a wick of iodoform gauze is inserted through the lower angle of the wound to the bottom of the rectovesical pouch, or cul-de-sac, the protecting gauze removed and the wound closed down to the tube with interrupted through-and-through silkworm sutures. A large-size tube is important, as I believe that the first two hours of drainage are those which count. This method is not advocated for the occasional operator, but for men of great experience.

Increasing Mortality in the United States from Heart, Brain and Kidney Lesions

DR. W. F. MILROY, Omaha, directed attention to the enormous increase of deaths from these diseases and offered suggestions as to what may be done by way of remedies.

Treatment of Angiomata and Nevi

DR. JOHN PRENTISS LORD, Omaha: The angiomata fall within the pale of surgery, while nevi, involving the skin only, fall within the sphere of dermatology. The conditions are so frequently associated that it becomes impossible to divide their treatment. Boiling water is of great value in treatment of angiomata and carbon dioxid snow in treatment of pigmented hairy nevi.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Senator Owen Declares in Favor of a Department of Health

Hon. Robert L. Owen, United States Senator from Oklahoma, delivered a speech in the United States Senate, Thursday, March 24, in support of Senate Bill 6049, introduced by him, providing for a Department of Public Health. Senator Owen stated that the present loss of life from preventable diseases in the United States amounts to over 600,000 lives per annum, while the economic loss amounts to over $2.000,000,000. After calling attention to the report of the Committee of One Hundred compiled by Prof. Irving Fisher, with the assistance of many well-known scientific men as his authority for these statements, Senator Owen discussed in detail the possibilities of the prolongation of life, the prevention of yellow fever, hookworm disease, bubonic plague, and other contagious diseases. He then read the letter from Dr. Charles A. L. Reed, chairman of the Committee on Legislation of the American Medical Association, which appeared in THE JOURNAL March 19, and quoted from President Taft, Mr. Roosevelt and others as to the necessity and importance of public health legislation. Senator Owen's argument for the establishment of a department instead of a bureau is of particular interest. He said:

> It is generally agreed that these bureaus should all be brought together as one working body. To bring established bureaus under a new "bureau of public health" would be to lower the dignity of the present bureaus by making them the subordinate bureaus of a new bureau, which would be offensive to every bureau so subordinated.
>
> To bring these bureaus under a department would not lower the prestige of a bureau thus coordinated with other bureaus under the department, and would, I believe, generally meet the approval of the government officers employed in the various bureaus so coordinated, giving them a new dignity by being a distinct branch of a department of public health, through which they could enlarge their efficiency and find better expression *and publicity of* work done for the public health.
>
> We have had bureaus for one hundred years. They are scattered in eight departments. They have been disconnected and without coordination. They have ever been jealous of each other, the one nullifying and hampering the work of another. They have been without a responsible head because of this subdivision and because the chief of the most important of these bureaus, the Surgeon-General of the Public Health and Marine-Hospital Service, *cannot* express an opinion or give information until he has consulted the Secretary of the Treasury.

BUBONIC PLAGUE ON THE PACIFIC COAST

Regarding the effect of control of the quarantine service by the Secretary of the Treasury, Senator Owen instanced the history of the epidemic of bubonic plague in San Francisco:

When the bubonic plague broke out in San Francisco in 1900—one of our importations from the Orient, known in former times as the black death or the plague—the city board of health of San Francisco quarantined the Chinese district. [It is the most deadly epidemic disease known to men. In the outbreak in Bombay 220,000 cases gave 164,000 deaths. This disease, as the black death, killed 68,596 people in London in 1665, nearly half of those who remained in the city.] The United States circuit judge, on June 15, 1900, influenced by the commercial spirit of San Francisco, declared the city quarantine illegal, gratuitously observing in his opinion:

"If it were within the province of this court to decide the point, I should hold that there is not and never has been a case of plague in this city."

This high authority on bubonic plague would also have decided, "if within the province of his court, that there never would be a case in San Francisco." His judgment in the one case would be as persuasive as in the other.

Bubonic plague was then in the city. It is now scattered over the Pacific coast at points a thousand miles apart and is requiring enormous sums of money to stamp it out, and it has not been stamped out, but is now endemic and spreading through the infection of ground squirrels and rats, which continually infect each other and spread the germs of the disease over enlarging areas.

This opinion of the United States circuit judge was followed with an immediate federal quarantine of the State of California, which was the duty of the government officers in charge under the obligation of the United States to the several States of the Union and to the nations of the world. The Marine-Hospital Service officials in San Francisco declared this quarantine.

The governor of California, the senators of California, and the commercial bodies of San Francisco immediately suppressed the Marine-Hospital Service report, compelled the Surgeon-General to yield, proved a false case, and made it temporarily stand as the truth before the country. They furnished evidence and proved (?) that there was no bubonic plague in San Francisco, nothwithstanding the fact bubonic plague was there in sober truth.

The Marine-Hospital Service finally persuaded the Secretary of the Interior to cause an inquiry in January, 1901, through experts of the highest class. This unanswerable authoritative report was made on Feb. 26, 1901, finding numerous cases of bubonic plague in the heart of San Francisco. The United States quarantine law (sec. 4) required its immediate publication. It was suppressed until April 19, 1901, and until it had been given publicity by the *Occidental Medical Times*, The Journal of the American Medical Association, the *Medical News*, and the *Sacramento Bee*.

Again the commercial interests of San Francisco triumphed over the bureau and compelled the Surgeon-General, the head of the bureau, by an order of his superior officer, the Secretary of the Treasury, to agree to suppress this report, contrary to the obvious moral and sanitary duty of the United States. From that time bubonic plague has widened the area of its terribly dangerous infection from Los Angeles to Seattle, passing from rat to rat and squirrel to squirrel and from these animals to an occasional human being through the agency of the common flea. Various experts of the Marine-Hospital Service, who immediately after the report of 1901 discovered the infection outside of San Francisco and reported the truth, were by some strange fatality shortly after their several reports removed from such duty faithfully performed and sent to the ends of the world—to Honolulu, to Ecuador, and so forth.

It is a most interesting history, the details of which might with propriety be given to the Senate as showing the destructive power commercial interests can exert over the faithful servants of a subordinate bureau.

Senator Owen then argued that a Department of Public Health is absolutely essential in order to comply with the international sanitary obligations of the United States, as a bureau which is subordinate to a department is not in a position to represent the United States in international sanitary affairs. He called attention to the International Sanitary Convention of American Republics held in Washington, Dec. 2-4, 1902, which pledged the respective health organizations of the various American republics participating to cooperate for the suppression of contagious diseases, and urged that a bureau has been tried in the balance and found wanting, and that the importance of the subject, the dignity and honor of the United States, its international relations and the health and welfare of the world demand the establishment of a Department of Health.

Senator Owen then reviewed the present cost of health agencies in the United States, showing that a sum of nearly $15,000,000 is being expended by the government and that over 12,000 persons are employed. He also showed by quotations from the various party platforms, reports of committees, and other sources, that the people are ready to support such a movement, closing his address as follows:

This is a question of vast national importance. In eight years we have increased our expenditures over the average of preceding years by the huge sum of one thousand millions for the Army and Navy, and are spending 70 per cent. of the national income to cover the obligations of past wars and the preparations for possible future war, or about seven hundred millions per annum. But for war on preventable disease now costing us infinite treasure in life, efficiency, and commercial power and prestige we spend nothing and do not even employ the agencies we have in an efficient manner.

In the name of the people and in the name of the American Medical Association, whose members are the faithful and self-sacrificing guardians of the health of our people, and in the name of the Committee of One Hundred, of the American Federation of Labor, of the National Grange, and of the various health boards of the forty-six states of the Union and of the great body of learned men desiring improved sanitation and the application of the improved agencies of preventing disease, disability, and death, I pray the Senate to establish a department of public health.

The principle of the bill meets the general approval of the public-health societies and of the medical associations of the United States, and there should be no difficulty in perfecting this bill and in impressing on the country the importance of organized effort to control the ravages of tuberculosis, typhoid and malarial fevers, bubonic plague, and other preventable diseases, which inflict such enormous injury on the people of the United States, impose such vast, but needless, human misery and pain, with great financial loss and loss of prestige and power.

A commercial nation will not be unmindful of the commercial value of the saving of life and efficiency possible, which is worth $3,000,000,000 per annum.

A humane nation will not fail to act when it is known that we could save the lives of 600,000 of our people annually, prevent the sickness of 3,000,000 of people per annum, who now suffer from preventable disease, and greatly abate the volume of human pain, misery, and death.

I trust, Mr. President, that the Senate may not fail to take action in regard to this matter at the present session.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month—Third Weekly Meeting

Pharmacologic and Therapeutic Actions of Drugs (Continued)

VII. Drugs Acting on Bodily Heat: A. Drugs which decrease bodily temperature, antipyretics. Thermogenesis, thermolysis, thermotaxis. 1. Drugs increasing loss of heat. 2. Decreasing production of heat. B. Drugs which cause rise of temperature.

VIII. Drugs Acting on Respiration: A. Drugs altering composition of air, by inhalation. 1. Drugs acting generally, anesthetics, amyl nitrite, etc. 2. Drugs stimulating bronchial secretion. 3. Drugs disinfecting foul secretions. 4. Relieving spasm of bronchial tubes. B. Drugs acting on respiratory centers. 1. Stimulants. 2. Depressants. C. Drugs affecting bronchial secretion. 1. Increasing. 2. Diminishing. 3. Disinfecting. D. Drugs relaxing spasm of bronchial tubes, asthma, etc. E. Expectorants. 1. Stimulating. 2. Depressing.

IX. Drugs Acting on Digestive Apparatus: A. Drugs acting on flow of saliva. 1. Sialagogues, act by (a) stimulation of secretory cells, or nerve terminals in them, (b) stimulating afferent nerves, in mouth or in stomach. 2. Antisialagogues, act by depressing (a) secretory cells and nerve terminals, or (b) afferent nerves. B. Drugs acting on stomach. 1. Increasing amount of gastric juice secreted. 2. Decreasing amount of gastric juice secreted. 3. Drugs altering composition of gastric contents. 4. Drugs which dilate vessels of stomach. 5. Drugs which contract vessels of stomach. 6. Drugs acting on nerves of stomach. 7. Drugs acting on movements of stomach. 8. Emetics. Act locally or centrally. 9. Antiemetics. Direct or indirect.

C. Drugs acting on intestines. 1. Purgatives. Laxatives, simple purgatives, cathartics, cholagogues. 2. Intestinal antiseptics. 3. Intestinal astringents. (a) Acting on vessels, (b) coagulating albuminous fluids, (c) diminishing amount of fluid secreted, (d) lessening muscular contractions.

Marriages

Jacob Kulis, M.D., to Miss Edith A. Olsjewski, both of Chicago, recently.

Francis W. McNamara, M.D., to Mrs. Ella May Eldredge, both of Chicago, March 19.

William Leon Channell, M.D., to Miss Edna Ingram, both of Oakland, Cal., March 16.

E. Don Taylor, M.D., Watertown, Ill., to Miss Katie Swanson of Colona, Ill., at Moline, March 16.

Marano Bernardo del Carmen Caballero, M.D., Porto Rico, to Miss Cecil Beatrice Mallory, at Petersburg, Va., March 17.

Deaths

Fred Byron Robinson, M.D. Rush Medical College, Chicago, 1882; a noted scientific investigator in anatomy and pathology; some-time professor of anatomy and clinical surgery in Toledo Medical College; professor of anatomy in the Post-Graduate Medical School and Hospital, Chicago; professor of surgery in the College of Physicians and Surgeons, Chicago; for thirteen years professor of gynecology and abdominal surgery in Illinois Medical College; professor of gynecology and diseases of the abdominal viscera in the Chicago College of Medicine and Surgery; a member of the Illinois State Medical Society; a man of boundless enthusiasm in the field of original research; a prolific writer; author of two volumes on intestinal surgery, four volumes on gynecologic subjects, an encyclopedic treatise on the peritoneum, and an extensive work on "The Abdominal and Pelvic Brain;" died at his home in River Forest, March 23, from disease of the kidney, aged 53.

Oliver Morse Dewing, M.D. College of Physicians and Surgeons, New York City, 1887; a member of the Medical Society of the State of New York, Associated Physicians of Long Island and American Medico-Psychological Association; formerly assistant physician in the New York Insane Asylum; transferred in 1889 to the Kings County Insane Asylum, of which he was made superintendent in 1892; appointed medical superintendent of that institution when it became a state hospital; and in 1897 made general superintendent of the Kings Park and Flatbush Insane Asylums; superintendent of the Long Island State Hospital, Flatbush; an acknowledged expert on treatment of the insane and asylum management; died at the State Hospital, Flatbush, March 15, from lobar pneumonia, aged 47. At a meeting of the staff of the hospital, March 22, resolutions of regret and sympathy were adopted.

Franklin Bennett Entrikin, M.D. Medical College of Ohio, Cincinnati, 1894; of Findlay, Ohio; a member of the American Medical Association and Association of Military Surgeons of the United States; formerly surgeon of the Second Infantry, Ohio N. G.; a member of the local pension examining board; oculist and aurist and a member of the consulting staff of the Findlay Home and Hospital; died in the Jewish Hospital, Cincinnati, March 16, from acute nephritis, after an operation for umbilical hernia, aged 38.

Orlando Scott Wood, M.D. Starling Medical College, Columbus, Ohio, 1891; College of Physicians and Surgeons, Baltimore, 1900; of Haydenville, Ohio; for six years a member of the staff of the Athens State Hospital, and for one term a trustee of the institution; surgeon of volunteers during the Spanish-American War, with service in Cuba; died in Mount Carmel Hospital, Columbus, March 14, from septicemia, due to an operation wound, aged 46.

Joseph W. Eddy, M.D. Detroit Medical College, 1874; a member of the American Medical Association and Syracuse Academy of Medicine; staff surgeon to the Oswego City Hospital; local surgeon of the New York Central System, and since 1886 chief surgeon to the Rome, Watertown and Ogdensburg division of that system; died at his home in Oswego, March 12, from acute bradycardia following cystitis and nephritis, aged 58.

Charles Peyton Gordon, M.D. New York University, New York City, 1860; surgeon in the Confederate service throughout the Civil War; a member of the Association of Surgeons of the Southern Railway Company and International Association of Railway Surgeons; for more than twenty years local surgeon of the Southern Railway at Dalton, Ga.; died at his home, March 16, from heart disease, aged 73.

William S. Wood, M.D. McGill University, Montreal, 1896; a member of the American Medical Association and Minnesota Valley Medical Association; a specialist on diseases of the eye, ear, nose and throat of Blooming Prairie, Minn.; died at the home of his father in Faribault, Minn., March 16, from pulmonary tuberculosis, following an infection of the throat, aged 36.

Arthur Delavan Stowitts, M.D. Albany (N. Y.) Medical College, 1886; a member of the American Medical Association; of Sidney, Neb.; local surgeon for the Union Pacific and Burlington systems; a member of the local board of United States Pension Examiners; died in the Methodist Hospital, Omaha, March 13, after an operation for mastoid disease, aged 48.

Henry Rhode, M.D. University of Goettingen, Germany, 1850; said to have been the oldest practitioner of Brown county, Wis.; at one time a surgeon in the Prussian army; physician of Brown county for several years, and a member of the pension examining board of Green Bay; died at his home in that city, March 16, from pneumonia, aged 80.

Ira Hudson Fry, M.D. Hahnemann Medical College, Chicago, 1881; a specialist on diseases of the eye, ear, nose and throat of Marshalltown, Iowa; while suffering from melancholia, is said to have committed suicide by hanging himself in an empty store building in Marshalltown, March 10, aged 51.

Raymond B. Harris, M.D. Savannah (Ga.) Medical College, 1859; assistant surgeon of the First and Fifty-seventh Ga. Infantry, C. S. A., during the Civil War; state senator in 1880 and 1881; an alderman of Savannah from 1889 to 1893; died at his home, March 15, from heart disease, aged 71.

John A. Hutchinson, M.D. Bennett Medical College, Chicago, 1878; a veteran of the Civil War; and at one time a member of the local pension examining board of New Haven, Conn., and later a resident of Cambridge, Mass.; died in the Soldiers' Home, Chelsea, Mass., March 13, from nephritis, aged 66.

Cyrus V. Gorrell, M.D. Fort Wayne (Ind.) College of Medicine, 1884; of Payne, Ohio; formerly a member of the American Medical Association; a member of the Ohio State Medical Association; died suddenly in the caboose of a freight train near Payne, March 7, from heart disease, aged 66.

Joel G. Williams, M.D. University of Missouri, Columbia, 1856; a member of the Illinois State Medical Society; assistant surgeon of the Second Illinois Volunteer Cavalry during the Civil War; died in a cottage at the Soldiers' Home, Quincy, March 17, from heart disease, aged 75.

John M. Coombs, M.D. Cincinnati College of Medicine and Surgery, 1865; a member of the Ohio State Medical Association; acting assistant surgeon in the Army during the Civil War; auditor of Defiance county, Ohio, in 1893; died at his home in Hicksville, March 13, aged 77.

Wade Hampton Barnett, M.D. University of Louisville, 1898; a member of the American Medical Association; a charter member and president in 1905 of the Williamson County (Tenn.) Medical Society; died at his home near Franklin, Tenn., February 28, from tuberculosis, aged 36.

Evans E. Brubaker, M.D. Starling Medical College, Columbus, 1878; a member of the American Medical Association; and local surgeon of the Chicago, Milwaukee and St. Paul Railway; died at his home in Northfield, Minn., January 6, from cancer of the liver, aged 56.

James McCann, M.D. Western Reserve University, Cleveland, 1856; of Normal, Ill.; formerly a member of the local pensioning examining boards of Joliet and El Paso, Ill.; died in the Kelso Sanitarium, Bloomington, March 18, from ptomain poisoning, aged 77.

Willis Anderson Barclift, M.D. University of Tennessee, Nashville, 1878; a member of the Medical Association of the State of Alabama; died at his home in Hartsells, March 14, after an operation performed at a hospital in Birmingham, aged 57.

Clarence W. Pickerill, M.D. Iowa Eclectic Medical College, Des Moines, 1892; of Kansas City, Mo.; formerly a member of the American Medical Association; died at the home of his parents in Lake Charles, La., February 20, from tuberculosis, aged 38.

David Allison Armfield, M.D. Jefferson Medical College, 1861; a member of the Medical Society of the State of North Carolina; for ten years United States pension examiner; died at his home in Jamestown, March 1, from pneumonia, aged 73.

William Herbert Nickelson, M.D. Hahnemann Medical College, Chicago, 1881; visiting physician to Syracuse Homeopathic Hospital; health officer of Adams, N. Y.; died in his office in that place March 14, from heart disease, aged 51.

Townsend A. Walker, M.D. University of Buffalo, N. Y., 1897; a member of the Medical Society of the State of New

York and Buffalo Academy of Medicine; died at his home in Corning, March 10, from cerebral hemorrhage, aged 40.

Hugh Alexander Utley, M.D. University of Nashville, Tenn., 1878; of Goodlettsville, Tenn., and vice-president of the National Bank of that place; died in an infirmary in Nashville, March 11, after a surgical operation, aged 56.

Warren Thomas Thornton, M.D. University of Kansas, Lawrence, 1908; a member of the staff of the Kansas City General Hospital; died in that institution, March 17, from septicemia, following a peritonsillar abscess, aged 26.

George T. Blynd, M.D. Northwestern University Medical School, Chicago, 1904; a member of the State Medical Society of Wisconsin; died at his home in Berlin, March 18, from tubercular meningitis, aged 34.

Walter Channing Blaisdell, M.D. Harvard Medical College, Boston, 1867; a member of the Massachusetts Medical Society; died at his home in Everett, Mass., Nov. 14, 1909, from acute enterocolitis, aged 65.

Myron Pelaski Fogleson, M.D. Bennett Medical College, Chicago, 1886; a member of the Michigan State Medical Society; died at his home in Harvard, January 23, from acute yellow atrophy of the liver.

Frank B. Hamilton, M.D. University of Nashville, 1867; a member of the Tennessee State Medical Association; a Confederate veteran; died at his home in Jackson, March 11, from rheumatism, aged 68.

Chester Carey, M.D. Long Island College Hospital, Brooklyn, 1881; a practitioner of Columbiaville, Mich., for thirty-five years; died at the home of his brother in Adrian, Mich., March 16, aged 62.

George L. Cunningham, M.D. University of Louisville, 1876; a pioneer practitioner of Conway county, Ark., and president of the bank of Morrillton; died at his home in that city, March 11, aged 76.

Hiram Newton Whitacre, M.D. Medical College of Ohio, Cincinnati, 1878; a member of the American Medical Association; died at his home in Carbondale, Ill., March 19, from pneumonia, aged 62.

Roswell Delavan Smith, M.D. New York Homeopathic Medical College, New York City, 1880; for many years a clergyman; died at his home in New York City, March 19, from asthma, aged 76.

John O. Dixon, M.D. Missouri Medical College, St. Louis, 1886; a member of the American Medical Association; died suddenly at his home in Marion, Ky., March 16, from heart disease, aged 49.

H. R. Trollinger (license, years of practice, Ohio, 1896); for fifty years a practitioner of Homeworth, Ohio; died at his home in that place, March 8, from cerebral hemorrhage, aged about 85.

Thomas Stuart Farrar, M.D. Trinity Medical College, Toronto, 1885; of Cedar Rapids, Iowa, was stricken with cerebral hemorrhage, on the street, March 18, and died, aged 49.

Fred W. Beil, M.D. Western Pennsylvania Medical College, Pittsburg, 1899; formerly of Sharon, Pa.; died at his home in Pittsburg, March 12, from tuberculosis, aged 35.

Valentine H. Hobson, M.D. Hospital College of Medicine, Louisville, 1889; of Richmond, Ky.; died in Lexington, Ky., March 15, from the effects of a fall from a window.

John G. MacNamara, M.D. Rush Medical College, 1884; of South St. Paul, Minn.; died suddenly in St. Joseph's Hospital, St. Paul, March 11, from heart disease, aged 55.

William Willet Moon, M.D. University of Vermont, Burlington, 1892; died at his home in Brooklyn, March 15, from pleurisy, complicating rheumatic fever, aged 40.

Greenbury Linton Shipp, M.D. University of Maryland, Baltimore, 1885; of Little Hocking, Ohio; died suddenly in that place, January 3, from heart disease, aged 47.

J. O. K. Gant, M.D. Washington University, St. Louis, 1865; a member of the Missouri State Medical Association; died at his home in Plattsburg March 8, aged 68.

William Benjamin Smith, M.D. Medical College of Ohio, Cincinnati, 1873; died at his home in Downing, Mo., March 3, from cerebral hemorrhage, aged 65.

William F. Walker, M.D. New York University, New York City, 1852; died at his home near Aberdeen, Miss., March 19, from paralysis, aged 82.

William Gregory Hea[illegible]ley, M.D. Albany (N. Y.) Medical College, 1899; died at his home in Cohoes, N. Y., March 15, aged 30.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, April 4-5. Sec., Dr. Ancil Martin.

CALIFORNIA: San Francisco, April 5. Sec., Dr. Charles L. Tisdale, 929 Butler Building.

COLORADO: Denver, April 5. Sec., Dr. S. D. VanMeter, 1723 Tremont Place.

FLORIDA: Jacksonville, April 4-5. Sec., Dr. J. D. Fernandez.

IDAHO: Boise, April 5. Sec., Dr. O. J. Allen, Bellevue.

ILLINOIS: Chicago, April 14-16. Sec., Dr. J. A. Egan, Springfield.

MINNESOTA: State University, Minneapolis, April 5. Sec., Dr. W. S. Fullerton, 214 American Nat'l Bank Bldg., St. Paul.

MONTANA: The Capitol, Helena, April 5. Sec., Dr. W. C. Riddell.

NEW MEXICO: Santa Fe, April 11-12. Sec., Dr. J. A. Massie.

OKLAHOMA: Ione Hotel, Guthrie, April 12. Sec., Dr. Frank P. Davis, Enid.

RHODE ISLAND: State House, Providence, April 7-8. Sec., Dr. Gardner T. Swarts, Room 315, State House.

WEST VIRGINIA: Wheeling, April 12-14. Sec., Dr. H. A. Barbee, Point Pleasant.

Iowa December Report

Dr. G. H. Sumner, secretary of the Iowa State Board of Medical Examiners, reports the written examination held at Des Moines, December 7-9, 1909. The number of subjects examined in was 8; percentage required to pass, 75. The total number of candidates examined was 8, of whom 3 passed and 5 failed. Thirteen reciprocal licenses were issued. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
George Washington University	(1908)	87.1
Sioux City College of Medicine	(1909)	81.1
University of Toronto, Ontario	(1908)	85.2

FAILED

College	Year Grad.	Per Cent.
University of Iowa, College of Medicine	(1909)	70.1
Keokuk Medical College, College of Phys. and Surg.	(1900)	72
Sioux City College of Medicine	(1909)	74.3
Rush Medical College	(1892)	68.1
St. Louis College of Physicians and Surgeons	(1909)	68.6

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Chicago	(1894) Wisconsin; (1905) (1906)	Illinois
Northwestern University Med. School	(1908) (2, 1909)	Illinois
Hahnemann Medical College and Hosp., Chicago	(1907)	Illinois
Keokuk Medical College	(1894)	Kansas
University of Louisville	(1909)	Illinois
University of Michigan, College of Medicine	(1908)	Michigan
Creighton Medical College	(1903) (1905) (1909)	Nebraska

Salicylate Treatment of Bacillus-Carriers.—How to free typhoid bacillus-carriers from their dangerous guests is a question which R. Hilgermann of Coblenz thinks can be solved by administering to them some drug that is readily eliminated by all the secretions, renders the bile more fluid and increases its amount, while it has a certain bactericidal action but is free from toxic action, even when taken for long periods. In a communication on the subject in the *Klinisches Jahrbuch*, 1910, xxii, 291, he announces that sodium salicylate fulfils all these conditions, and that he has successfully used it for the purpose in 3 cases. The bacillus-carriers in question were in the Andernach insane asylum and he gave the salicylate in 1 gm. (15 grain) doses three, four or five times a day for a week at time, giving five courses in one year in one case. The stools became entirely free from typhoid bacilli after the third course and none has been found during the nearly two years since. After even one course of the salicylate the number of typhoid bacilli rapidly diminished and those found displayed very little vitality. Experimental research has confirmed these clinical findings justifying the hope, he believes, that a course of sodium salicylate after recovery from typhoid would clear out remaining bacilli and prevent the individual's becoming a chronic bacillus-carrier. In his cases the carriers had sheltered the bacilli for so many years that it was far more difficult to dislodge them than would be the case with comparatively recent typhoid infection. The salicylate does not display such powerful bactericidal action in respect to paratyphoid bacilli.

Book Notices

ARTHRITIS DEFORMANS: COMPRISING RHEUMATOID ARTHRITIS, OSTEO-ARTHRITIS, AND SPONDYLITIS DEFORMANS. By R. Llewellyn Jones, M.B., Fellow and Member of Council of British Balneological and Climatological Society. Cloth. Pp. 353, with 38 Illustrations. Price, $4 net. New York: William Wood & Co., 1909.

This book is a most interesting and valuable contribution from the viewpoint of a former medical officer of the Royal Mineral Water Hospital of Bath, England, and comes very opportunely for consideration with the recent valuable work of Goldthwait, Painter and Osgood, and the still more recent paper by Nichols and Richardson in the *Journal of Medical Research* for September, 1909. The author says that his chief aim is to indicate and emphasize the essential distinctness of the two diseases, rheumatoid arthritis and osteo-arthritis. Special consideration has been given to the premonitory symptoms which characterize the period of invasion of rheumatoid arthritis, in the hope that it may assist in the early recognition of the affection so essential to its successful treatment. From the historical chapter one learns that there have been even more etiologic theories than names advanced for this disease or group of diseases; and with reason.

From the author's standpoint there are two distinct diseases, namely, rheumatoid arthritis and osteo-arthritis; whereas, we in America, viewing the condition somewhat more from the pathologic findings, include all under the term osteo-arthritis, and pathologically divide the cases into the atrophic and hypertrophic varieties, although the work of Nichols and Richardson has shown that identical pathologic findings clearly arise from a variety of causes, in fact from about all of the causes that have heretofore been regarded as etiologic factors.

We recommend the perusal of this book to all those interested in chronic non-tuberculous joint diseases; but we call attention to the fact that the author uses the terms "atrophic arthritis" and "hypertrophic arthritis" in the ordinary sense of obvious atrophy and hypertrophy of the joints, and not in the sense used by Nichol and Richardson, which is based on the microscopic findings in the joint structures. The historical references are most numerous and range from Cicero and Shakespeare down.

DISEASES OF CHILDREN. Translated by J. L. Salinger. Edited by Abraham Jacobi, M.D., LL.D., Consulting Physician Mt. Sinai, Bellevue and German Hospitals, etc. Pp. 828, with 34 illustrations. New York: D. Appleton & Co., 1910.

Perhaps no more accurate or illuminating statement could be made concerning the quality of this work by twenty-three German and Austrian authors than that of the editor. As he says, the articles are all written by masters of national or international renown, are evidently weighed with care and guided by learning, and are brief but complete and lucid. The list of authors includes such names as Czerny, Neumann, Hoffa, Henoch, Heubner, Baginsky, Escherich, C. Keller and others equally authoritative. The book is hardly in the usual text-book style, but each monograph is written in the complete and thorough manner of the Germans, and all coordinated, so that there is no overlapping in the treatment of the subjects. Among the unusually complete chapters is that on the diseases of the new-born, which includes a very interesting section on those infectious diseases which may be transmitted from the mother or father to the fetus. Other chapters are on infantile scurvy, rickets, syphilis, convulsions, infantile paralysis and scarlet fever. In a few instances the treatment is not very fully given, but is usually sufficiently complete. As is usual in foreign works, the work of American authors in pediatrics is not referred to except casually in a few instances, and the editor calls attention to this fact. This is partially compensated for, however, by careful, even critical editing by Dr. Jacobi, who adds a word or a phrase here and there to the text to modify a too dogmatic statement, or by way of criticism, or reference to work by Americans, and by full foot-notes in elaboration of management or treatment, or on some other phase, where it seems to be necessary. The book contains a number of charts and a few other illustrations. The translation under the supervision of Dr. Salinger is good and makes a very readable book. Aside from the preference of some for a text-book by a single author, the work is an eminently satisfactory one on the subject.

THE CAMPAIGN AGAINST MICROBES. By Etienne Burnett, M.D., of the Pasteur Institute; Head for the Vaccination Service of the City of Paris. Translated from the French by E. E. Austin, F.Z.S. Cloth. Pp. 248. Price, $2.25 net. New York: William Wood & Co., 1909.

This work consists of 227 pages. The subjects treated are cancer, tuberculosis, tetanus, sleeping-sickness, enteritis and variola: the original article by Jenner on vaccination is added as an appendix. The subjects are treated in a semi-popular way, and yet the method is a little too technical, at least for the general American reading public. It will appeal to medical men who wish to be instructed and entertained and to the better informed people who have had some technical training. The literature is freely drawn on.

In discussing cancer the author lays especial stress on the possible contagiousness of the disease, and quotes freely from experiences of himself and others to show that there is a relation between such etiologic factors as soil moisture, dirty vegetables and contact with affected individuals in cancer. In considering tuberculosis he gives a good deal of space to experiences tending to confirm the importance of food in relation to the spread of this disease, discussing at some length vaccination, and especially bovo-vaccination. Sleeping-sickness is of only general interest to Americans. Burnett reviews the geography and the history of the disease at considerable length and then discusses the possibility of medicinal cure. His discussion of enteritis is given over almost entirely to what we in this country term mucous colitis, and the fermentations taking place in the intestinal tract in relation to senility. He advocates the use of various methods of preventing intestinal putrefaction as a means of attaining old age. A large part of his article on variola is given over to a discussion of the history of the subject, and in this he has much to say of the personality of Jenner and the men of his time.

MALE DISEASES IN GENERAL PRACTICE. An Introduction to Andrology. By Edred M. Corner, M.A., Surgeon to Children's Hospital. Cloth. Pp. 462, with illustrations. Price, $6. London: Oxford University Press, 1910.

As its name indicates, this work considers the surgical diseases of the organs peculiar to the male. There are a few points which require special approval as they are unusually well presented, though much of the technic developed by American surgeons is not introduced at all and weakened by its absence an otherwise strong work. The chapter on Varicocele is good and a commendable tabulation of the ultimate results of the operation is given showing 70 per cent. of the patients as distinctly improved. Circumcision in old men is advised as a prophylactic for penile carcinoma; also nerve blocking anesthesia is recommended for the operation. A chapter on Hermaphroditism brings out several interesting case histories. Some very pleasing work on the cremasteric reflex is mentioned and certainly opens up a field for investigation. The minor operation of meatorrhaphy is recommended in preference to meatotomy. This places epithelium to mucous membrane and thus avoids the granulation tissues produced in meatotomy. Syphilis is considered only in its initial stage and a strong point is made of the variability of the gross appearance of the chancre depending on its location. In the chapter on sterility the operation of vasoepididymostomy is only mentioned as possible. In discussing vesiculitis, no mention is made of treatment through the vas deferens. In discussing tapping for hydrocele, Belfield's trocar is conspicuous by its absence. A nice point in the use of collodion dressings is illustrated by a neat diagram.

SPONDYLOTHERAPY: Spinal Concussion and the Application of Other Methods to the Spine in the Treatment of Disease. By Albert Abrams, M.D., Consulting Physician to the Mount Zion and French Hospitals, San Francisco. Cloth. Pp. 420, with 100 illustrations. Price, $3.50. San Francisco: The Philopolis Press, 1909.

Opposite the title page appears a list of twelve books by the same author. The *raison d'être* for the book under consideration appears to be that "the subject of spinal therapeutics has received less attention from the medical profession than it deserves. Even the laity knows that cold applied to the back of the neck arrests hemorrhage from the nose, and that heat applied to the small of the back may hasten menstruation. The profound and far-reaching physiologic truths which underly these simple phenomena have either been ignored or *only given inconsiderate attention*."

In looking through this book of over four hundred pages with its 97 illustrations, covering practically every pathologic condition that can possibly have any relation to the spine from muscular hypotonia and vibro-suppression through osteoarthritis, Pott's disease and spondylitis, scoliosis and spinal curvature, sacroiliac disease and sacroiliac relaxation, tumors and typhoid, syphilis, gonorrhea and rickets to pseudoesophagismus and cortical sinusoidalization and many score others, one wonders whether this is an attempt to explain osteopathy and chiropractic to the understanding of the regular practitioner, or to exploit the very ingenious percussion devices of the author, or whether it is really true that medical men really know practically nothing about the cure of disease through treatment of the spine. Let us hope that it is the latter and that a careful study of this unique volume may open new avenues of therapy heretofore undreamed of.

Diagnostic Therapeutics. A Guide for Practitioners in Diagnosis by Aid of Drugs and Methods other than Drug-Giving. By Albert Abrams, A.M., M.D., Consulting Physician to the Mount Zion Hospital and the French Hospital. Cloth. Pp. 1039, with 99 illustrations. Price, $5. New York: Rebman Company [1910].

In this work the author enters what is to a large extent a new field. The attempt is made to show the use of drugs and other remedial measures in determining the diagnosis of disease. Although desirous of limiting himself exclusively to diagnostic pharmacotherapy, it was necessary to add other therapeutic procedures in order to maintain the continuity of the subject. The result of this seems to be a lack of due proportion and emphasis. In the abundance of therapeutic suggestions which flow from the author's reading and experience, it is hard to differentiate those that are of diagnostic value. Some of the statements, we feel sure, have been made without due qualification and without a full appreciation of their real significance; for instance: "Hemorrhages in typhoid fever and phthisis are really due to a plethora, and may be averted, if recurrent, by venesection," page 416. We hope that none of Dr. Abrams' readers will put this method into practice without due discrimination between hemoptysis due to congestion and hemorrhage due to erosion of a blood-vessel.

Ueber den Einfluss der basedow'schen Krankheit und verwandter Zustande auf das Langenwachstum nebst einigen Gesetzen der Ossifikation. Aus der Poliklinik für innere Krankheiten am Serafimerlazarett in Stockholm. Von J. Holmgren, Leitendem Arzt der inneren Abteilung des Provinzialkrankenhauses zu Falun, Schweden. Paper. Pp. 244, with 2 plates. Leipzig: Druck von Metzger & Wittig, 1909.

This monograph gives the results of an investigation of 114 cases of hyperthyroidism in patients under 25 with reference to the height and growth in the length of the body. The author finds that there is an evident association of the disease with increased height, and he concludes that hyperthyroidism favors a rapid increase in the length of the body, and, considering the fact that lack of thyroid secretion, as in cases of myxedema, is accompanied by deficient growth in length, he concludes that it is one of the functions of the thyroid to control the growth of the skeleton. He calls attention also to the relation between a blond complexion and increased height on the one hand and hyperthyroidism on the other. He also brings evidence to show that infections, by action on the thyroid gland, may favor the growth in height. The volume constitutes a valuable contribution to a very interesting subject.

Surgical Anatomy. By John A. C. Macewen, B.Sc. in Anatomy and Physiology with Honors, Fellow of the Faculty of Physicians and Surgeons, Glasgow. Cloth. Pp. 478, with 61 illustrations. Price, $3 net. New York: William Wood & Co., 1910.

This is a discussion of surgical anatomy, such as the physician who operates occasionally stands in need of most. The only departure from the usual work of this kind is that the author surveys the anatomy of hernia from the abdominal instead of from the external surface, which really makes very clear a subject the student usually finds rather difficult to comprehend. Naturally there can be little to criticize in a work of this kind, which is based on established facts. The illustrations, while not numerous, are well chosen and a number of them, especially in the chapter on the head, are new and helpful. The dull-finish paper and the clear, clean type are features worthy [illegible] mention. Section 1 considers the head and neck, vertebral column, brain and spinal cord; Section 2, the thorax; Section 3, the abdomen and pelvis; Section 4, the lower extremity; and Section 5, the upper extremity.

A Quiz Book of Nursing for Teachers and Students. By Amy E. Pope, Superintendent Insular School of Nursing, San Juan, Porto Rico, and Thirza A. Pope, Supervisor of Visiting Nurses of the New York A. I. C. P. With Chapters on Visiting Nursing, by Margaret A. Bewlwy, R.N., Instructor in Visiting and District Nursing in the Presbyterian Hospital, New York. Hospital Planning, Construction and Equipment, by Bertrand E. Taylor, A.A.I.A., and Hospital Bookkeeping and Statistics, by Frederic B. Morlok, Chief Clerk in Presbyterian Hospital, New York. Cloth. Pp. 469. Price, $1.75. New York: G. P. Putnam's Sons, 1909.

This book, while nominally intended for teachers and students, will prove of most value to teachers, 364 of the 461 pages of text being devoted to questions and answers. The remainder takes up visiting nursing, including tuberculosis work, hospital planning and construction, and hospital bookkeeping and statistics. The book should be valuable to superintendents of hospitals, especially those who must combine with the duties of superintendent the work of matron and housekeeper.

A Practical Guide to the Administration of Anesthetics. By R. J. Probyn-Williams, M.D., Senior Anesthetist and Instructor in Anesthetics at the London Hospital. Cloth. Pp. 228, with 44 illustrations. Price, $1.60. Second Edition. New York: Longmans, Green & Co., 1909.

Handbooks and guides to the proper administration of anesthetics appear to be gaining in favor, if we are to judge by the many books on the subject now in the market. Williams' work easily takes position as among the best of these by reason of its excellent arrangement and clearness and conciseness of style. The author has added descriptions of the newer methods and apparatus, and entirely revised the chapter on ethyl chlorid, which he regards in its proper light as a substitute for nitrous oxid and not as a rival of ether or chloroform—and added a chapter on spinal anesthesia. He would reserve the use of spinal anesthesia for those operations below the umbilicus in which a general anesthetic is dangerous to the patient and would never use it in patients who are septic.

Mammalian Anatomy with Special Reference to the Cat. By Alvin Davison, Ph.D., Ex-Fellow of Prince University. Cloth. Pp. 241, with 114 illustrations. Second Edition. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co., 1910.

This is a brief description of the anatomy of the cat, emphasizing its close relation to that of the other higher mammals. While intended primarily for students of zoology or pre-medical students it will serve as a clear concise guide for any one who has occasion to dissect the cat or one of the ordinary domestic animals. By means of numerous, well-selected illustrations, showing both histologic structure and the gross relationship of the parts, and the clear descriptions, a great deal of information is condensed into a small attractive volume.

Medical Diagnosis. A Manual for Students and Practitioners. By Charles Lyman Greene, M.D., Professor of Medicine and Chief of the Department in the College of Medicine, University of Minnesota. Flexible leather. Pp. 725, with illustrations. Third Edition. Price, $3.50 net. Philadelphia: P. Blakiston's Son & Co., 1910.

The third edition of this book has been largely rewritten and rearranged, includes information on all the new topics, and nothing seems to have failed to receive at least some mention. As stated in our comments on its first appearance, for a brief work on a large subject it is excellent and practical in every way.

Clinical Memoranda for General Practitioners. By Alex. Theodore Brand, M.D., and John Robert Keith, M.D. Cloth. Pp. 207. Price, $1.50 net. New York: William Wood & Co., 1909.

In this brief work the authors have collected memoranda, on a variety of clinical subjects. Much of this matter is not found in the ordinary text-book, but represents the personal experience of the authors. The subjects selected are such as the physician meets daily; cases are related when it is deemed necessary to emphasize diagnostic points, and hints are given as to treatment in various conditions.

Anatomy and Physiology for Nurses. By LeRoy Lewis, M.D., Surgeon to and Lecturer on Anatomy and Physiology for Nurses at the Lewis Hospital, Bay City, Mich. Second Edition. Cloth. Price, $1.75 net. Pp. 344, with 161 illustrations. Philadelphia: W. B. Saunders Co., 1910.

This has been revised and brought up to date by the addition of some new matter, among which are a number of illustrations.

Medicolegal

What Is Privileged Information—Inferences and Testimony as to Necessity—Duty of Physicians Employed by Other Party

The Supreme Court of Utah says, in the personal injury case of Madsen vs. Utah Light and Railway Co. (105 Pac. R. 799), that it seems quite clear that the legislature did not intend that all information, whether by communication or otherwise, which is obtained by physicians from their patients, should be privileged by the Utah statute, which provides: "A physician or surgeon cannot, without the consent of his patient, be examined in a civil action as to any information acquired in attending the patient which was necessary to enable him to prescribe or act for the patient." The statute is not intended as an aid to conceal or smother the truth in a court of justice; but its object is to protect as privileged all that may be said by a patient to his physician while the relation of trust and confidence exists, and, further, to protect all the information a physician obtains through his senses of touch, sight, or otherwise, during such relation, provided the communication or information was reasonably necessary to enable the physician to accomplish the purpose for which the relation of physician and patient is called into existence.

The law does not raise a presumption either way with regard to whether the information acquired by a physician from his patient was necessary for him to prescribe for the patient, but leaves the question as one of fact. Where therefore it is made to appear that a physician prescribed for or treated a person, or that the physician obtained any information from such person for the purpose of doing so, the inference arises that such information was necessary, and, unless this inference is rebutted, the ultimate fact that it was necessary may be assumed to be established. When, however, this inference is negatived by the testimony of the physician disclosing to the court just what the facts were under which the information was obtained, then it may be that the inference is entirely overcome. Quite true, the testimony of the physician may not, in all cases and under all circumstances, be conclusive, and the court may still be justified in holding the information necessary, the statement of the physician to the contrary notwithstanding. If the rule were otherwise, the physician would have it in his power to either enforce the statute with respect to all information, or to ignore it with respect to all. This would be unreasonable.

The testimony of the physician from which the court may determine whether the information was or was not necessary to enable the physician to act is always important, and, the court thinks, should receive fair and full consideration; but in determining its weight and effect it should be considered in the light of all the facts and the surrounding circumstances. In some cases and under some circumstances the statement or information obtained from the patient may be self-explanatory, and thus a mere inspection of it, if written, or merely having it stated, if oral, may be sufficient to enable the court to determine whether the information is privileged or not. In other cases the physician's statement as to whether the information was necessary or not may be conclusive on the subject.

If, in order to enable a physician to prescribe for an injured patient, it becomes necessary for the physician to know how an accident occurred, and he obtains the information while the relation contemplated by the statute exists, the information is privileged, although it may be a narrative of the events leading to an accidental injury. Neither the trial court nor this court therefore should arbitrarily either admit or exclude all information which may relate to the accident or injury; but, in determining whether specific information should be excluded or admitted, the purpose of the statute should be kept in mind, and if, in the judgment of the court, the particular information in question comes within the statute, it should be excluded, and, if otherwise, it should be admitted in evidence.

The plaintiff in this case submitted himself into the hands of two physicians, and permitted them to administer an anesthetic so that they might make a more thorough examination of his person. The physicians made the examination for the purpose of obtaining information to enable them to treat his injury. That they also had another purpose in mind, namely, to learn the scope and effect of the injury for the benefit of the defendant company, in no way changed their relation to the plaintiff.

No doubt the company, through its agents, had a right to obtain from the plaintiff all the information with respect to the cause and extent of the injury he was willing to impart to them; but in obtaining such information it had to exercise some discretion in selecting its agents. If it selected two skilled physicians and surgeons, and thus led the plaintiff to believe or assume that those physicians sought information from him with a view of prescribing for his injuries, then such information was privileged under the statute, regardless of the fact that the physicians sought the information for the further purpose of disclosing it in a court of justice in case he brought an action for damages against the company. If the physicians desired to obtain the information for the latter purpose only, they should have explained the matter fully to him, and should have told him that they sought the information for the purpose of imparting it to the company, and not for the purpose of aiding him.

If, under the latter circumstances, the injured person permits an examination, or imparts information, no confidence is abused, and no statute is invaded, and hence he may not be heard to complain; but persons who are injured by accidents of any kind should be treated fairly by the skilled physicians who seek information of the character protected by the statute. The statute is plain, and its purpose is just and humane. It seems to this court that it is the duty of the courts to give the statute full scope and effect; but, in doing so, to prevent, if possible, either party from gaining an advantage contrary to the true spirit and intent of the statute.

Death Certificate Not Evidence

The Court of Appeals of Kentucky says, in Louisville Railway Co. vs. Raymond's Administrator (123 S. W. R. 281), wherein the administrator sought to recover from the railway company for the death of the said Raymond, alleged to have been the result of an injury caused by the negligence of the company, that the company offered in evidence a copy of the death certificate made by the attending physician, showing the cause of the death as tuberculosis. But this was not permitted to be read in evidence, and the court holds properly so, it not appearing that the physician who made it was himself dead at the time of the trial. If he were dead, a different question would be presented, though what the decision on it would be is not stated. While the Kentucky statute requires the physician to give the death certificate, there is nothing in the statute making the certificate evidence in judicial proceedings, and it stands entirely on a different plane from the return of an officer made pursuant to law under his official oath. The law requires the best evidence, and the best evidence would be the testimony of the physician, if living.

Validity of Cocain Ordinance—City Cannot Impose Forfeiture of Licenses

The Court of Appeals of Maryland holds constitutional, in Rossberg vs. State (74 Atl. R. 581), an ordinance of the city of Baltimore prohibiting the sale, furnishing, giving away, or having in possession cocain and kindred substances, or compounds thereof, except on certain conditions provided in the ordinance, but invalid so much of the penalty as provided that if the offender was a licensed pharmacist, physician, dentist, or veterinary surgeon, he should forfeit his license. The court states that it is not prepared to say that where a pharmacist, physician, dentist, or veterinary surgeon, in violation of the restrictions of the ordinance, deliberately or recklessly sells the prohibited drugs, or keeps them in his possession for the purpose of such sale, that the forfeiture of his license is so oppressive as to be unreasonable. On the contrary, it is disposed to believe that both with regard to the depravity of the offender, adequate penalty. But the trouble here was that the city charter did not give it power to declare any forfeiture, while the general rule is that an ordinance cannot create a forfeiture and to the protection of the public against the evil at which the ordinance is aimed, forfeiture of license is the only fully in the absence of express legislative authority to do it.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

March 19

1 *The X-Ray in Diagnosis of Pulmonary Tuberculosis. C. L. Minor, Asheville, N. C.
2 Tuberculosis and Its Treatment by Administration of Mercury. B. L. Wright, U. S. Navy.
3 *Value and Proper Method of Performance of Auscultatory Percussion of the Heart. W. F. Milroy, Omaha.
4 Plastic Induration of the Corpus Cavernosum. H. J. Whitacre, Cincinnati.
5 *Practical and Potent Means of Reducing Infant Mortality from Diarrheal Disease. J. Sobel and L. Marcus, New York.
6 Congenital Cataract, Successful Operation at the Age of 23 Years. M. Talmey, New York.
7 The X-Ray and Ultra-Violet Ray in Dental Diagnosis and Treatment. S. Tousey, New York.
8 Cerebrospinal Meningitis. C. Bagley, Baltimore.
9 Case Illustrating the Arrest of Early Paresis. T. A. Williams, Washington, D. C.

1. **X-Ray Diagnosis of Tuberculosis.**—As a means of early diagnosis, the fluoroscope, Minor says, while useful, is, save in the case of bronchial gland shadows, by no means equal to an expert use of standard physical diagnostic methods. Many *x*-ray specialists differ from this view, some maintaining that it is a far earlier means of diagnosis, but Minor is satisfied that this is chiefly due to the fact that the radiologist is rarely an expert physical diagnostician. In Germany, where several distinguished diagnosticians have used the *x*-ray freely, extreme assertions for the early diagnostic value of the ray are not so common as in this country. Hence the statement that any given case was negative on physical examination and showed shadows with the *x*-ray is of no great value unless it is known who made the physical examination. Minor has not found that the *x*-ray examination can give information antedating rough inspiration, feeble breathing or slight vesiculobronchial breathing, as it must if it is to precede physical signs, and when the pathologic conditions which produce these slight changes are considered, it seems most improbable that they should cause shadows.

3. **Auscultatory Percussion of the Heart.**—The method of performing auscultatory percussion of the heart, recommended by Milroy can easily be performed with the patient in the upright position. It is more conveniently done with the patient in the dorsal position and the examiner at his right side. The objective end of the stethoscope is placed immediately to the left of the sternum and extending upward from the fourth space. The instrument is held in this position with moderate pressure by an assistant or by the right hand of the patient. A finger of the examiner's left hand serves as the pleximeter. Milroy prefers the little finger, as thus one's hand does not interfere with the stethoscope. It is placed in the fifth intercostal space at a point so far to the left as to be entirely beyond the cardiac border. The pressure of the pleximeter finger must be uniform, as it is moved from place to place during the performance of percussion. To secure this uniformity it is advisable that the pressure of this finger be so firm that the fifth and sixth ribs are both distinctly felt in each position of the finger. The percussion stroke must be of very moderate intensity and must be uniform in force. Thus inaugurated, percussion is made from left to right until the pitch of the percussion note is observed to change, the site of this change representing the situation of the left border of the heart. In determining the situation of the right border the procedure is similar. The chest piece of the instrument is placed at the left of the sternum over the heart. Percussion is made in the fourth space, at which level is found the greatest projection of the heart to the right. Commencing well beyond the cardiac limit the examiner passes from right to left, noting the border of the heart at the point where the change in the quality of sound first appears. Similar percussion will locate the right border at other points, if so desired.

5. **Lectures and Infant Mortality.**—During the summer of 1908 and 1909, the Department of Health in New York City appointed six physicians to act in the capacity of lecturers to the mothers and *"little mothers;"* these lectures, or rather short heart to heart talks, were given for the greater part during the afternoons in the public school recreation centers, and occasionally at night, on the roofs of other institutions. The subject matter was summer care of babies, all that prophylaxis and treatment of the children entails. With this lecture, the authors feel that they have accomplished more actual good, gained more positive results, prevented more gastrointestinal disease and terminated more cases in their incipiency during the last two summers than during all the previous summers under other systems. The future problem of reducing infant mortality from summer diarrhea lies in the procuring of clean, cool milk. If the laity could be educated to the fact that the intelligent use of milk of the aforementioned type will prevent diarrhea a great advance will have been made. This system is only in its developmental stage and great possibilities are in store for it. With each succeeding year the daily attendance will increase so that in time a large proportion will receive instruction in this way. Already the tenement house population in New York has been aroused and interested by the dissemination of knowledge obtained at these lectures. The use of grocery milk for the feeding of infants has been markedly diminished. The vicious habits of feeding with any and all kinds of gastroenteric irritants was curtailed. The obnoxious habit of adding large quantities of brandy to boiled and cereal waters and the giving of beer and wine to older children has been in a great measure remedied.

Medical Record, New York

March 19

10 Method of Respiration by Intratracheal Insufflation: its Scientific Principle and Its Practical Availability in Medicine and Surgery. S. J. Meltzer, New York.
11 *Avoidance of Apparatus Complicating the Operation—A Paramount Requirement in Thoracic Surgery. W. Meyer, New York.
12 Experimental Intrathoracic Surgery by the Meltzer and Auer Method of Intratracheal Insufflation. A. Carrel, New York.
13 The Value of Continuous Intratracheal Insufflation of Air (Meltzer) in Thoracic Surgery. C. A. Elsberg, New York.
14 Curious Arrangement of Capsule of the Lens After Simple Extraction of Cataract. J. S. Fernandez, Havana, Cuba.
15 Lumbar Analgesia. M. Breuer, Buffalo, N. Y.

11. **Apparatus for Thoracic Surgery.**—Meyer criticizes in detail the various apparatus used in thoracic surgery and formulates the following conclusions:

1. Intrathoracic surgery cannot be done properly and safely without differential pressure apparatus.

2. Negative and positive differential pressure are, it seems, not identical in their effects on sick human beings. Whether they are or not, must still be established, and indications be found for their use. This is rendered feasible by the universal differential pressure chamber.

3. Continuous intratracheal insufflation as practiced by Meltzer and Auer appears to be a positive differential pressure system.

4. Its weak points are the use of the human trachea as a vital part of the apparatus; the possibility of aspiration at the beginning of the operation, with subsequent pneumonia, and of interstitial emphysema at the end of the operation, as a consequence of its employment; also the required deep anesthesia. Intubation reaching below the glottis has been found to give rise in the human trachea to immediate copious secretion of mucus.

5. Sudden complete interruption of the prevailing differential pressure, followed immediately by its equally sudden restoration, as practiced in continuous intratracheal insufflation, is liable to hurt the human heart. Very slight changes in intrabronchial pressure give rise to very great changes in blood pressure.

6. Continuous intratracheal insufflation apparatus is not adapted for use in the after-treatment, nor is it otherwise all-sufficient. Those employing it need some other type of differential pressure apparatus in addition to it, in order to be prepared for every emergency.

7. The safest method of general anesthesia is the one used in our every-day surgical work, the inhaling of the narcotic with spontaneous respiration and with mouth and throat left unencumbered. This method is the one used in the larger differential pressure chambers.

8. In surgery, when entrusting human life to the safe working of mechanical apparatus, it is wise to have substitutes on hand, in order to be prepared for accidents. In continuous intratracheal insufflation everything depends, at present, on the one cannula and the patency of the trachea.

9. So far as the patient is concerned, a differential pressure system leaving mouth, throat and trachea unencumbered, appears preferable to one requiring intubation.

Boston Medical and Surgical Journal

March 17

16 The Responsibility of the General Practitioner and the Specialist in the Prevention of Deafness. F. P. Emerson, Boston.
17 *Restraint Instead of Treatment in Hospitals for the Insane. L. V. Briggs, Boston.
18 Varicocele: An Analysis of Four Hundred and Three Cases. J. D. Barney, Boston.
19 The Transplantation of Cartilage in the Correction of Deformities of the Nose. D. C. Greene, Boston.

17. Restraint Instead of Treatment in Hospitals for the Insane.—It is evident to any one who has intelligently studied the conditions of the insane, that there is very little treatment and decidedly too much restraint. Fifty years ago it was not expected that insane persons would have much more than board and restraint. If they did not hurt themselves or other people, the public seemed to be satisfied. The same conditions exist as to a greater part of our insane to-day. It seems that legislation is sadly needed to abolish restraint, excepting as a life-saving measure, but if this is impossible, then to regulate the amount of restraint used, the conditions under which it shall be used, and that each individual case shall have the same amount of medical care and supervision as in any other disease. More physicians should be assigned to the care of the insane in institutions; women nurses should, to a greater extent, replace male attendants. If the barbarous custom of restraint must be continued, all appliances should be kept in the office and under the lock and key of the superintendent, who should see every patient and decide whether or not restraint is necessary, and should make a record of the kind and amount and different forms of restraint used. This should apply not only to state institutions for the insane, but to general and private hospitals.

Lancet-Clinic, Cincinnati

March 5

20 Symptoms of Pellagra. J. J. Watson, Columbia, S. C.
21 Inflammation of the Seminal Vesicles. J. N. Baughman, Evansville.
22 A Case of Amebiasis. L. J. Krouse, Cincinnati.

March 12

23 Tuberculosis of Epiphyses of the Femur and Tibia: Case Fifteen Years After Evidement. B. Holmes, Chicago.
24 Tuberculosis and Its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.
25 A Comparison of Hemoglobin and Chlorophyll. W. F. Keller, Cincinnati.

March 19

26 Thyroid Diseases. L. Heimann, Evansville, Ind.
27 An Improved Technic in the Operative Treatment of Goiter. J. R. Wathen, Louisville.
28 The Surgical Treatment of Goiter. W. D. Haines, Cincinnati.
29 Tuberculosis and Its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.
30 Congenital Hypertrophic Stenosis of the Pylorus. W. Schell, Terre Haute, Ind.

Virginia Medical Semi-Monthly, Richmond

February 25

31 Treatment of Suppurative Sinuses and Fistulas. L. H. Reichelderfer, Washington, D. C.
32 *Pylorospasm. J. J. Gilbride, Philadelphia.
33 Result of Late Gonorrhea. J. J. Lloyd, Lynchburg.
34 Gastroptosis. M. O. Burke, Richmond.
35 *Home Treatment of Epilepsy as Compared with Institutional Treatment. M. Woods, Philadelphia.
36 Excision of the Coccyx for Fracture and Neurosis. E. N. Liell, Jacksonville, Fla.
37 Symptoms and Diagnosis of Typhoid. A. J. Black, Roanoke.
38 Treatment of Rheumatism. W. F. Waugh, Chicago.
39 Experience with Puerperal Eclampsia. J. H. Hiden, Pungoteague.
40 Puerperal Sapremia and Sepsis—Their Treatment. J. E. Cannaday, Charleston.

32, 35. Published in the *Pennsylvania Medical Journal*, February, 1910, and abstracted in THE JOURNAL, March 19, 1910, p. 1007.

Northwestern Lancet, Minneapolis

March 1

41 The Minnesota State Association. E. L. Tuohy, Duluth, Minn.
42 *The Minnesota State Board of Medical Examiners. F. A. Knights.
43 *The Minnesota State Board of Health in Cooperation with State Forces in Minnesota Medicine. H. M. Bracken, Minneapolis.
44 *Minnesota State Board of Control in Its Medical Relationships. H. A. Tomlinson, St. Peter, Minn.
45 *Relation of the University Medical School to the Minnesota State Medical Association. C. L. Greene, St. Paul.
46 *The Medical Press. W. A. Jones, Minneapolis.
47 *The Lay Press. H. V. Jones, Minneapolis.

42 to 47. Abstracted in THE JOURNAL, Nov. 20, 1909, pp. 1848, 1849.

Journal Missouri State Medical Association, St. Louis

March

48 *Education of the Insane. G. W. Robinson, Kansas City.
49 Otitic Sinus Phlebitis and Thrombosis: Report of a Case of Phlebitis and Thrombosis of Lateral Sinus and Jugular Bulb. W. E. Sauer, St. Louis.
50 Accidental Removal of the Stapes. F. C. Simon, St. Louis.
51 Phases of Labyrinthine Diseases Following Middle Ear and Mastoid Suppuration. C. F. Pfingsten, St. Louis.
52 Methods of Clinical Teaching in Otology. S. Spencer, St. Louis.
53 Glaucoma. F. B. Tiffany, Kansas City.
54 Osteoma of the Chorioid. W. H. Schutz, Kansas City.
55 Extrauterine Pregnancy in Patients with Gonorrheal Salpingitis. H. S. Crossen, St. Louis.
56 Dysmenorrhea. J. M. Dean, St. Louis.
57 The Open Method of Treating Infected Joints: Report of a Case. J. D. Seba, Bland.
58 Epidemic of Typhoid from Contamination of Missouri River Water. O. W. H. Mitchell, Columbia.

48. Education of the Insane.—The so-called chronic insane are subdivided by Robinson into three classes—the progressively incurable dements, such as the paretics and senile dements; the physically helpless, such as the paralyzed and those who are neither physically helpless nor afflicted with progressively incurable dementia. Patients in the two former classes constitute a small percentage of the hospital population, and about all they need is kind treatment, good nursing and careful attention to their physical needs. This they get in most, if not all state hospitals. The greater percentage of the population in state hospitals is composed of a class of persons who have entered the hospital as acute patients, who have not been restored to health, and who are left over, as it were, from year to year, until there is a large accumulation. These people are not sick, but are in good physical condition. They do not need hospital treatment, excepting occasionally as one of them has an acute attack of sickness of some character. For them the insane hospitals are nothing more than jails, the only function of which is custodial; the insane person must live alone with his delusions and a mind concentrated on the ego. It is not surprising that these patients frequently become violent and have to be restrained by mechanical means and sedative drugs. What they need and want is mental and physical occupation. They must be given occupation for all the faculties of the mind and work for the hands. Some of them show very little mental reduction and likewise very little perversion of mental faculties. Those who show the greatest amount of mental reduction should be treated as very small children who are beginning on the first principles of education. They should be given a kindergarten course just as the small child, with about the same course of study. Those who have suffered less mental reduction need not begin with the fundamentals, but they can begin a little farther on in the course which should be progressive in character and should be systematically carried out. In addition to the kindergarten department there should also be a well-equipped manual training department. These departments should be directed by well-qualified teachers. Every insane hospital should have a well-furnished general library for the patients' use. These patients should be encouraged to read wisely selected books and brought together at certain intervals by a competent teacher to tell what they have been reading. They should also under the direction of a well-qualified teacher be given a course of ordinary school study.

The most important part of the treatment, however, is the manual training department and ordinary labor. A course in a well-equipped and well-directed manual training department is, perhaps, the best method of producing all-around mental and physical development. Every faculty of the mind as well as the hands are exercised and developed. An industrial building for the industrial reeducation of these patients is very essential. In such a building the clothing of all the patients can be made, mattresses manufactured, furniture repaired, and much new furniture made, etc. Such a building will pay in money saved the institutions which is now spent for such supplies as can be made by the patients. Many of the women patients are now employed in all hospitals in the wards, laundry, kitchen, dining-rooms, etc., while many of the men are employed on the farm, in the dairy, in repair work on buildings, cleaning the campus, building fences, working in concrete, road building and, in short, doing about everything and every kind of work there is to do.

Long Island Medical Journal, Brooklyn

February

59 Surgery in Diabetes. L. S. Pilcher, Brooklyn.
60 Food Poisoning. E. H. Bartley, Brooklyn.
61 Laboratory Methods in Diagnosis of Typhoid. A. Murray, Brooklyn.
62 Acute Gonorrhea in the Male. J. S. Read, Brooklyn.
63 Lipoma of the Ascending Colon. R. W. Westbrook, Brooklyn.

American Journal of Medical Sciences, Philadelphia

March

64 Congenital Single Kidney: Practical Significance of the Condition with Statistics. J. M. Anders, Philadelphia.
65 The Treatment of Rheumatic Fever. F. S. Meara, New York.
66 *Decompression in Treatment of Meningitis. J. F. Hultgen, Chicago.
67 Essential Pentosuria. S. S. Cohen, Philadelphia.
68 Chemical Examination of a Sample of Urine Containing Pentose. C. H. La Wall, Philadelphia.
69 Adiposis Dolorosa with Myxedematous Manifestations. H. Stern, New York.
70 *Hemophilia with a Case of Typhoid in a Hemophilic Subject. C. W. Larned, Baltimore.
71 *Etiologic Factors of Compressed-Air Illness. L. E. McWhorter, New York.
72 *Myatonia Congenita of Oppenheim. J. V. Haberman, New York.
73 Syphilitic Paralysis of the Trigeminal Nerve. W. G. Spiller and C. D. Camp, Philadelphia.
74 Pathology of the Cranial Nerves in Tabes Dorsalis. T. A. Williams, Washington, D. C.
75 *Acute Pulmonary Edema as a Terminal Event in Certain Forms of Epilepsy. A. P. Ohlmacher, Detroit.
76 The Physiologic Utilization of Some Complete Carbohydrates. L. B. Mendel and M. D. Swartz, New York.

66. **Decompression in Meningitis.**—Hultgen reports four cases. The first case was one of serous meningitis, cured by lumbar puncture alone. The patient is now in excellent health. The second case was one of undetermined meningitis, but probably of influenzal nature (leucocytic formula, pneumonia, and otitis media). Improvement occurred after lumbar puncture and progressed to complete recovery. The patient is in good health now. The third case was one of acute meningitis, probably influenzal, with very rapid recovery after decompression. The patient is in good health now. The fourth case was one of tuberculous meningitis, with recovery. Lumbar puncture, as the only therapeutic measure used in this case, must be considered curative. The removal of intracranial hyperpressure, that is, decompression, was accomplished promptly and thoroughly by means of two consecutive lumbar punctures.

70. **Hemophilia.**—The points of interest in connection with Larned's case are: (1) the inheritance came through the father, who was himself a bleeder; (2) this is the first case, so far as Larned knows, of typhoid fever reported in a bleeder; (3) a case of typhoid may be brought to a successful termination in a patient so afflicted; (4) no hemorrhages occurred from the intestinal lesions; (5) the successful termination in this instance was probably in large measure due to the fact that at or about the age of forty the hemorrhagic tendency abated; (6) in this man's case the principal manifestation of the hemorrhagic tendency had been attacks of epistaxis, the only other serious hemorrhage having occurred at the time of an operation for ingrowing toenail.

71. **Compressed-Air Illness.**—McWhorter endeavors to prove the following:

1. In subaqueous tunnels the loss of air by leakage is sufficient to maintain perfect ventilation, and, therefore, carbon dioxid, carbon monoxid, and other gases do not accumulate in sufficient quantities to be considered possible etiologic factors in the causation of compressed-air illness.
2. The direct cause of compressed-air illness is the presence of air bubbles in the circulation; these gas bubbles consist of nitrogen, carbon dioxid, and oxygen, of which nitrogen is in excess, for the reason that this gas is the chief constituent of the atmosphere, and also does not combine with any of the body tissues.
3. New workers are most susceptible to this disease until the body accommodates itself to this entirely abnormal condition of high air pressure; and therefore, it is of the utmost importance that only young, healthy men should be allowed to do this work. New workers should, when feasible, be started in low pressures, from which in the course of four or five days, they may graduate to become, as they are called, "high-pressure men."

72. **Myomata Congenita.**—Haberman reports three cases which presented certain points in common—a rather extensive apparently flaccid paralysis, with absence of patellar and Achilles reflexes. In one there is vasomotor disturbance, in another slight atrophy, masked however, by adiposis. Viewed thus far, these cases might be taken for anteropoliomyelitis. A little closer analysis, however, will bring out certain interesting facts—namely, that two cases with certainty, and one case quite probably, date from birth, or, in other words, are congenital. Congenital cases of anteropoliomyelitis appear not to exist. Haberman believes that the one case cited in the literature has nothing to do with poliomyelitis, as two other children of the family were similarly afflicted (familial intrauterine poliomyelitis), and the paralysis was progressive—increased instead of decreasing, as is the rule in anteropoliomyelitis. Furthermore, there is no really degenerative atrophy present with reactions of degeneration. The paralysis, which is extensive, especially in two of Haberman's cases, has not gradually confined itself to an area smaller in extent than that which was at first affected, as is almost invariably the case in anteropoliomyelitis. Finally, on careful examination, one sees that some movements are present in the affected muscles, that we are not really dealing with genuine paralysis, but with an extreme condition of muscular atony. These muscles feel soft and doughy, and, except in one case, are not cold to the touch.

The clinical picture of myatonia congenita is a typical one, and may be described, Haberman asserts, as a congenital, atonic pseudoparalysis, encountered in the first two or three years of childhood, when the reflexes are very weak or abolished, electrical reaction reduced but never degenerative, real atrophy not met with, the distribution proximal with no progression, the muscles or bulbar innervation practically exempt, and no sensory, bladder, nor rectal involvement occurring. In a minimal group the children are older, contractures are present, the muscles small and thin (atrophic?).

75. **Acute Pulmonary Edema.**—The observations made by Ohlmacher in 5 cases, should, he says, tend in two directions—to emphasize the importance of acute edema of the lungs as a concurrence in epilepsy, and further to illustrate the kinship between certain types of epilepsy and status lymphaticus.

Atlanta Journal-Record of Medicine

February

77 The Chattahoochee Valley Medical and Surgical Association. A. L. Harlan, Alexander City, Ala.
78 Danger in Adenoids and Diseased Tonsils. H. R. Slack, La Grange, Ga.
79 Abortion. J. S. Horsley, West Point, Ga.
80 The Automobile as a Curative Factor in Catarrhal and Bronchial Affections. S. A. Visanska, Atlanta.
81 Treatment of Pneumonia. L. W. Johnson, Tuskegee, Ala.
82 Organ Therapy. R. Westmoreland, Atlanta.

Journal of the Medical Society of New Jersey, Orange

February

83 Points in Infant Feeding. D. E. English, Summit.
84 Ophthalmia Neonatorum. T. R. Paganelli, New York.
85 Spontaneous Rupture of Pyosalpinx into the General Peritoneal Cavity Producing Acute Diffuse Peritonitis. C. W. Bonney, Philadelphia.
86 Pyelitis: Especially Its Occurrence in Infants. T. N. Gray, East Orange.
87 The First Inklings of Disease. A. McAlister, Camden.
88 Heubner's Mustard Treatment of Catarrhal Pneumonia in Children. A. Stern, Elizabeth.
89 Directions to a Young Physician. D. Swift.

Military Surgeon, Washington, D. C.

March

90 Substitute for the Correspondence School in the Training of National Guard Medical Officers. C. C. Foster, Cambridge, Mass.
91 How May the Value of the Medical Department to the Military Esta[illegible]? R. G. Ebert, U. S. Army.
92 Practical Fi[illegible] T. Harris, U. S. Army.
93 Suggestion [illegible]edical Equipment of Mobile Units in [illegible], U. S. Army.
94 Importance to the Army of Diseases Transmitted by Mosquitoes and Methods for Their Prevention. C. F. Craig, U. S. Army.
95 Comments on the Disappearance of "Potomac Malaria" at Fort Myer, Va. F. A. Winter, U. S. Army.
96 Dangers of Introducing Infections from Our Tropical Possessions by Returning Troops. F. M. Hartsock, U. S. Army.
97 Account of an Instructive Typhoid Epidemic. P. M. Ashburn, U. S. Army.
98 Liquor Cresolis Compositus, Extempore. J. R. Barber, U. S. Army.
99 Treatment of Acute Epididymitis and Orchitis. H. Butts, U. S. Navy.
100 Shotgun Wound of Toe. F. T. Woodbury, U. S. Army.
101 Medical Service with Cavalry in the Field. W. M. Roberts, U. S. Army.
102 Military Hygiene in Cold Countries. R. H. Pierson, U. S. Army.
103 *Reinforced Plaster Splint. R. M. Thornburgh, U. S. Army.

103. **Reinforced Plaster Splint.**—The idea of this splint was suggested to Thornburgh by reinforced concrete building construction. After reduction of the fracture in the usual way, the leg is encased in one thickness of absorbent cotton and this is held in place by a few turns of roller bandage, applied tightly. A wet plaster roller is now wound round until at least two thicknesses surround the leg. A sufficient length of

wire mesh is placed along the inner side of the leg and bent over the sole of the foot to form a stirrup. By cutting a few wires here and there it can be perfectly moulded to the plaster dressing already in place. The outer side of the leg receives a similar strip of mesh but no stirrup. The strips of mesh should leave a gap of about an inch both in front and rear. While assistants hold the mesh in place the operator again applies the plaster roller until several layers are outside of the mesh. Plaster is applied by hand in the usual way, but only half as much is used as in the ordinary plaster splint. The dressing is allowed to set for several hours and then split with saw or cutting pliers down front, back, and along top of stirrup. Two perfectly formed moulds are thus made, which are held in place by adhesive straps or tapes embedded in the plaster. These straps may be tightened as the limb becomes emaciated or the pressure may be exactly regulated, for the splints will neither bend nor break. The patient can move about in bed, without danger of disturbing the relations of the fragments.

Alabama Medical Journal, Birmingham

February

104 Early Diagnosis of Tuberculosis by the Tuberculin Test. W. Litterer, Nashville.
105 Fibroid Tumors Complicating Pregnancy. G. Torrance, Birmingham.
106 *Medical Treatment of Dysentery. J. M. Lowrey, Birmingham.
107 *Acute Traumatic Fever—Etiology and Treatment. J. F. Jenkins, Piper.
108 *Traumatic Osteoperiostitis. G. A. Hogan, Birmingham.

106. Abstracted in THE JOURNAL, Feb. 5, 1910, p. 484.

107. Abstracted in THE JOURNAL, Jan. 29, 1910, p. 394.

108. Abstracted in THE JOURNAL, Feb. 19, 1910, p. 644.

Wisconsin Medical Journal, Milwaukee

February

109 The Physician and the Child. L. R. Sleyster, Appleton.
110 *Anomalies of the Mastoid from a Surgical Standpoint. H. B. Hitz, Milwaukee.
111 The Management of Typhoid, with Special Reference to Diet. W. E. Robertson, Philadelphia.
112 The Action of Certain Oxidizing Substances on the Respiratory Center. A. S. Loevenhart and W. E. Grove, Madison.
113 The Cure of Traumatic Neurosis. T. A. Williams, Washington, D. C.

110. Abstracted in THE JOURNAL, Aug. 7, 1909, p. 480.

Journal of Biological Chemistry, Baltimore

February

114 The Optical Inactivity of Allantoin. L. B. Mendel and H. C. Dakin, New York.
115 Mechanism of the Oxidation of Glucose by Bromin. H. H. Bunzel, Chicago.
116 *Purin Metabolism of the Monkey. H. G. Wells, Chicago.
117 *Effect of Castration on the Metabolism. F. H. McCrudden, Boston.
118 Chemical Analysis of Bone from a Case of Human Adolescent Osteomalacia. F. H. McCrudden, Boston.
119 *Influence of Dietary Alterations on the Types of Intestinal Flora. C. A. Herter and A. I. Kendall, New York.

116. **Purin Metabolism of the Monkey.**—Wells finds that the monkey like other mammals possesses the power of destroying uric acid by an oxidase found in the liver. The urine of monekys contains very little purin nitrogen. A small amount of uric acid was found in the urine of a monkey dying from tuberculosis, but was not present in the urine of normal monkeys.

117. **Effect of Castration on Metabolism.**—McCrudden reaches a result somewhat at variance with the common idea that castration tends to produce obesity. There was no retention of material, especially of the mineral elements, but the results show a general tendency in the opposite direction; when there was a retention of material before castration, this retention was either decreased or became a loss after castration in almost every instance. Clinical investigation does not sustain the view that obesity is likely to follow the removal of the ovaries in women as a rule. The experiments of McCrudden appear to bear against the theory that osteomalacia is a disease of the ovaries which is cured by castration. This theory McCrudden proposes to discuss in a subsequent paper.

119. **Dietary Alternations and Intestinal Flora.**—The authors' experiments on kittens and monkeys show that an abrupt change in diet from a dominantly protein (meat and eggs) to a milk and sugar diet is followed by an alteration of physiologic conditions in three distinct directions (a) in the nature of the intestinal flora; (b) in the putrefactive products of the feces and urine; and (c) in the clinical conditions. The chief characteristic of the bacterial change is the gradual but rapid substitution of an acidophilic non-proteolyzing type of flora for a strongly proteolyzing type. The chief feature of the putrefactive conditions in the intestine is the reduction of the indol, skatol, phenol and bound hydrogen sulphid and a diminution in the indican and aromatic oxy-acids of the urine. Clinically, the most striking feature of the change in diet is (in monkeys) an improvement in spirits and activity which may safely be construed as showing a markedly improved sense of bodily and physical well being. While some of these changes may be due to reduction of protein it seems much more probable that the changes in the flora observed are mainly due to the influence of the carbohydrates and that the diminished intestinal putrefaction is due to the combined influence of diminution in protein and the addition of carbohydrate materials to the diet. The physiologic alternations in the flora which the authors claim to have established by their studies have been noted only in normal animals. They have as yet made no effort to study the effects of diet on animals in which the digestive tract is the seat of inflammation. They consider it likely that analogous conditions will be found to exist in man.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

February

120 A Study of Hyperchlorhydria. G. M. Piersol, Philadelphia.
121 Adrenal Therapy. C. E. De M. Sajous, Philadelphia.
122 The Medical Examiner's Work as Viewed by a Special Examiner. C. O. Carter, Harrisburg, Pa.
123 Rational Treatment of Hypertension and Sclerosis of the Arterial System (continued). C. Pope, Louisville.
124 Dyspeptic Diarrhea with Pneumonia and Meningeal Symptoms. W. G. Hollopeter, Philadelphia.
125 Which Preparation of the Pituitary is the Best to Use in Tetany? I. Ott and J. C. Scott, Philadelphia.
126 Psychotherapy. W. E. Magruder, Sandy Spring, Md.
127 The Insane in Pennsylvania: What the State is Doing for Them. F. Woodbury, Philadelphia.
128 Fractures of the Patella: Modern Operative Treatment (concluded). A. P. Heineck, Chicago.

Journal of the Delaware State Medical Society, Wilmington

March

129 *Simultaneous Case of Intrauterine and Extrauterine Pregnancy. S. C. Rumford, Wilmington.
130 Dr. Jos H. Chandler. J. P. Pyle, Wilmington.
131 Id. H. W. Briggs, Wilmington.

129. **Intrauterine and Extrauterine Pregnancy.**—The patient last menstruated in July, 1908. April 13, 1909, she had poor labor pains, which gradually ceased after a few hours; the same thing occurred on April 17 and 24, but on none of these dates was there any dilatation of the cervix. April 26, a bloody product was passed after unusually severe pains, and proved to be a six weeks' fetus and placenta. At this time the cervix was soft and dilated and fresh blood coming from the uterine cavity. The patient was very comfortable for several days, but there was no decrease in the size of her abdomen and she still felt fetal movements. She was taken to the Delaware Hospital, Wilmington, May 3. Examination showed the abdomen distended with fluid. In the left flank a mass could at times be detected that seemed to float away from the examining hand. It was impossible to outline this mass by the vagina or to locate the fundus because of the intra-abdominal fluid, but the cervix was soft and patulous and a pale lochial discharge was present. As the patient was in poor condition and much exhausted by her trip to the hospital, a couple of days were spent in getting her in good shape for operation. On opening the abdomen by a median incision, Rumford found the cavity filled with a dark brownish and very offensive fluid, and floating about in this a male child at full term, showing very feeble signs of life. The intestines had been forced up under the lower border of the ribs, and confined there by an unusually large but thin placenta, which was adherent to the intestines, omentum, liver and the parietal peritoneum along the right side of the abdomen. The whole peritoneal cavity presented a pale, unhealthy appearance, and in separating the placental adhesions there was little tendency to bleeding. The uterus was enlarged and soft, and the tubes and ovaries normal. The child had the same pale, macerated appearance as the other structures and in delivering it the cord was broken, but from neither end was

there any bleeding. The child, after a couple of gasps, ceased breathing and its heart refused to beat in about ten minutes.

Iowa Medical Journal, Des Moines

February

132 Ophthalmia Neonatorum in Iowa. Consideration of State Prophylaxis. E. R. Lewis, Dubuque.
133 Developmental and Surgical Relation of Nose and Mouth. G. V. I. Brown, Milwaukee.
134 The Nasal Polypus. A. W. Elmer, Davenport.
135 The Course of a Frontal Sinusitis. H. Bailey, Charles City.
136 Staphylococcus Septicemia. L. W. Littig, Iowa City.
137 Two Cases of Subacute Combined Cord Degeneration. F. A. Ely, Des Moines.
138 Pellagra in Iowa. J. B. Kessler, Iowa City.

University of Pennsylvania Medical Bulletin, Philadelphia

January

139 *Resection of Posterior Spinal Roots for Relief of Spasticity. W. G. Spiller and C. H. Frazier, Philadelphia.
140 Mitral Stenosis with Multiple Emboli. H. B. Allyn, Philadelphia.
141 *Splenomedullary Leucemia in Childhood. H. T. Karsner, Philadelphia.
142 The Nature of Peculiar Bodies Found in the Leucocytes of Guinea-Pigs. J. W. Hunter, Philadelphia.

February

143 Extrasystolic Arrhythmia Simulating Heart Block. G. W. [illegible]
144 *[illegible] nial Aponeurosis and Temporal Fascias. G. G. Davis, Philadelphia.
145 *Comparison of Karyokinetic Leucocytes in Different Types of Leucemia. W. Pepper, Philadelphia.
146 Additional Cases of Blastomycosis. A. J. Smith, Philadelphia.

139. **Resection of Posterior Spinal Roots for Relief of Spasticity.**—This operation was first advocated by Spiller early in 1905. He stated that it was permissible in almost every case in which spasticity is great and motor weakness is slight, provided the condition of the patient justified it, whether the lesion be spinal or cerebral, unilateral or bilateral. It is useless when motor palsy is great. Frazier performed this operation with much success in one case, which Spiller and Frazier report. The man's trouble began in December, 1903, following a drinking bout. He was examined by Spiller, Sept. 25, 1909, in view of operation. The notes of this examination are as follows: Voluntary power in lower limbs is about normal, but spasticity in these limbs is extreme. He cannot separate the thighs because of this great spasticity. The patellar tendon reflex is so exaggerated on each side that a tap on the patellar tendon throws the corresponding limb into a general clonus. Patellar clonus, so-called spinal epilepsy, persistent ankle clonus, and Babinski reflex are present on each side. Touch, pain and temperature sensations are normal in each lower limb. The cremasteric reflex is prompt on each side. The sense of position is normal in each great toe. He has control over the bladder and rectum. He is unable to walk without support (canes) because of the extreme spasticity; the toes of one foot catch behind the heel of the other foot in walking, and when he is standing still the heels do not touch the ground because of the spasticity of the calf muscles. Spiller examined the patient again on Sept. 28, 1909, after the operation. The notes of this examination are as follows: He has touch, pain and temperature sensations in the legs below the knees and in the back of the thighs, but has no touch and temperature sensations on front of either thigh. On the front of the left thigh, he feels pin pricks, but cannot feel them on the front of the right thigh. The patellar reflex is completely lost on each side; Achilles reflex is nearly normal on the left side, but is weak on the right side. He lies with thighs far apart and legs extended. He feels touch, pain and temperature sensations in front of the abdomen. He complains of much pain low in the back, and pain is intense here on voluntary or passive movements of lower limbs. The cremaster reflex is lost on each side. He can flex slightly each lower limb at the hip, knee and ankle, and moves his toes freely. He moved his right lower limb freely, he says, a couple of hours after the operation, the left not so well. Both lower limbs and lower abdomen as far as the umbilicus feel as though dead. In October, 1909, he was able to stand if supported, but could not put much weight on the lower limbs. Pain was not so severe now as it was soon after the operation. The movements of the lower limbs were free, and he had control of the bladder and rectum. On December 17 there was great impairment if not complete loss of sensations for touch, pain, heat and cold in an area very nearly similar on the two sides and confined to the front and sides of the thighs. He can separate his thighs, flex and extend them to the normal degree. The patellar reflex is present on the left side in so far as there is distinct contraction of the quadriceps muscle, but there is no movement of the left on the thigh in this reflex. The patellar reflex on the right side is present but very weak. The Achilles reflex is nearly normal on the left side, but is very weak on the right side. Typical Babinski reflex is obtained on each side. He gets in and out of bed without difficulty. He moves his feet at the ankles with much freedom, but not to the normal degree, and places his feet firmly on the ground. There is no positive disturbance of sensation below the knees. The functions of bladder and bowels are normal. He goes up stairs with freedom, but has difficulty in descending stairs. He walks with a cane and a crutch. He has still some tendency to drag the toes, but in nothing like the degree that was present before the operation. The movements at hips and knees are nearly normal, but are still impaired at the ankles.

141. **Splenomedullary Leucemia in Childhood.**—Karsner adds one case to seven now recorded in the literature. His patient was 2 years old.

143. **Extrasystolic Arrhythmia Simulating Heart-Block.**—An interesting case of myocarditis is reported by Norris. That it was a case of myocarditis was evidenced by the physical examination by a marked limitation in the field of cardiac response, and by the pulse tracings, which showed at times a marked delay of conductivity and also a typical pulsus alternans, both of which conditions are of bad prognostic import. The patient was suffering from a very atypical form of arrhythmia, which was clinically manifested by a disappearance of every other arterial pulse wave, thus suddenly and often for a considerable interval of time halving the pulse rate. For a period of about three weeks this arrhythmia could be brought on at will by deep breathing and other simple procedures and was apparently always associated with, and at least in part the result of, increased blood pressure. It was positively not a case of auriculoventricular heart-block. The administration of digitalis invariably made the condition worse and sometimes seemed to be the direct cause of it. The effect of belladonna, on the other hand, seemed to be beneficial, and considering the diametrically opposite effect of these two drugs on the vagus, suggests that this nerve may have played an important part in the production of the arrhythmia. Certain reasons may be advanced for believing that we were not dealing with extrasystolic arrhythmia properly understood at all, but with the condition which has been designated as "true bigeminus;" the close-coupled contraction of left ventricle as well as the auscultatory examination of the heart, would, however, seem to contradict this belief. Norris believes that the form of the arrhythmia varied at different times and that sometimes it was not a "true bigeminus," at others there were undoubted extrasystoles. One other explanation, however, seems possible, *i. e.*, that the peripheral pulse intermissions simply resulted from an extreme degree of myocardial weakness, which caused the small waves of a pulsus alternans to drop out entirely. The author states that he has never seen such a case described, but can see no reason why such a state of affairs should not be perfectly possible. Three other cases are reported. Basing his conclusions on these four cases, Norris states that extrasystolic arrhythmia may simulate heart-block by the fact: (1) that the peripheral pulse may be very slow; (2) that the jugular veins may be distended and pulsate markedly in the intervals between the radial pulses; (3) that a muffled third muscular sound may be heard on auscultation over the heart which does not correspond to a peripheral pulse; (4) that there are no distinctive symptoms of true heart-block.

144. **Anatomy of Epicranial Aponeuroses and Temporal Fascias.**—Davis finds that effusions beneath the epicranial aponeurosis are limited below as follows: The occipital protuberance, superior curved line of the occiput, mastoid process, top of the ear, upper edge of the zygoma, external angular process and possibly, for a short time, at the upper edge of the orbit, but either at once or in a comparatively short time invade

first the upper and then the lower lids. The outer side of the orbit seems to be an especially favorable spot for effusions to gain entrance to the subcutaneous tissues of the lids. The accumulations occurring above the zygoma may either remain above it or possibly, especially if serous, leak through and extend a short distance below. Effusions occurring beneath the pericranium of the parietal region may, as pointed out by Richet, descend toward the temporal region, in which case they pass over the deep temporal aponeurosis.

145. **Karyokinetic Leucocytes in Leucemia.**—Pepper found that there is no more resemblance between the karyokinetic cells in acute lymphatic leucemia and in splenomyelogenous leucemia than there is between the typical "large lymphocytes" and the myelocytes of the same disease.

Laryngoscope, St. Louis

February

147 New Methods [illegible] d Their Practical Significance. R [illegible]
148 Symptoms of [illegible] with Presentation of Two Cases: Operation: Recovery. J. McCoy, New York.
149 Mastoid Operation, Simple and Radical, Under Local Anesthesia. E. W. Day, Pittsburg.
150 Intranasal Drainage of the Frontal Sinus. E. F. Ingals, Chicago.
151 Rhinoscleroma. A. Braun, New York.
152 Rapid and Thorough Method of Opening into the Maxillary Antrum in Selected Chronic Cases. O. J. Stein, Chicago.
153 Squamous-Celled Epithelioma of the Antrum of Highmore. A. P. Voislawsky and A. Braun, New York.
154 Diseases of the Accessory Sinuses Causing Ocular Symptoms. F. E. Waxham, Denver.
155 Laryngeal Carcinoma Under Observation for Thirteen Years—Ultimate Laryngectomy. O. Smith, New York.
156 Bronchoscopic Aid in Thoracotomy. O. C. Gaub and C. Jackson, Pittsburg.
157 An Anesthetic Attachment for the Bronchoscope. C. Jackson, Pittsburg.
158 Two Unusual and Interesting Cases of Acute Edema of the Larynx. H. Foster, Kansas City.
159 Chloretone as a Local Sedative to the Respiratory Tract. W. S. Anderson, Detroit.

Southern California Practitioner, Los Angeles

February

160 Application of the Wassermann Reaction in General Medicine, Based on 968 Examinations: Special Reference to the Blood of the Insane. R. C. Matson, Portland, Ore.
161 Immunity and Tuberculosis. W. W. Watkins, Phoenix, Ariz.
162 Surgical Technic. J. B. McNally, Prescott, Ariz.
163 Modified Smallpox. C. D. Ball, Santa Ana, Cal.
164 Trifacial Neuralgia. D. D. Whedon, San Diego, Cal.

Interstate Medical Journal, St. Louis

March

165 *Plea for Uniform Interstate Rules in Treatment of the Venereal Diseases as a Prophylaxis of the Evil of Society. A. Ravogli, Cincinnati.
166 Symptoms of Uncinariasis. G. Dock, New Orleans.
167 Pathology of Uncinariasis. N. Evans, Nashville, Tenn.
168 Early Symptoms of Pellagra. C. C. Bass, New Orleans.
169 Tetany. E. S. Cross, Savannah, Ga.

165. **Prophylaxis of Social Evil.**—As it has been demonstrated that the treatment of the venereal diseases is the best prophylaxis against the spreading of the scourge, it is clear that some interstate rules concerning this treatment would be of great advantage to combat their diffusion. These rules, according to Ravogli, could be formulated as follows:

Every hospital (unless it be for special diseases) is compelled to accept venereal patients when disabled. In every general hospital there must be a department for the treatment of venereal diseases. In these wards there must be observed complete secrecy and discretion, in order to prevent any publicity. It must be in the power of the health officer to compel any hospital to give treatment to a disabled venereal patient. In large cities the patients must have the benefit of the clinics and dispensaries attached to the hospitals or to the medical colleges. In smaller communities dispensaries must be instituted for treatment of venereal diseases, by order of the county board of health. Medicines and treatment for poor patients must be given free of charge. Physicians in charge of these dispensaries must be specialists well-trained in the treatment of these diseases.

Vermont Medical Monthly, Burlington

February

170 Prostatic Obstruction: Indications for Operation with a Description of a Method of Operating. P. Syms, New York.
171 Ileus, Mechanical and Dynamic. L. Allen, Burlington.
172 Normal Pregnancy. C. A. Pratt, Enosburg Falls.

American Medicine, New York

February

173 Surgical Treatment of Epilepsy: Methods and Possibilities of Brain Surgery. W. P. Carr, Washington, D. C.
174 Tuberculosis of the Peritoneum, Uterus and Adnexa. F. J. Shoop, Brooklyn.
175 Success in Treatment of Chronic Disease. H. R. Harrower, Chicago.
176 Action of Glandular Extracts on the Secretion of Urine. I. Ott and J. C. Scott, Philadelphia.
177 *Therapeutic Value of Diaphoresis in Treatment of Ocular Diseases. A. Brav, Philadelphia.
178 The Dermatologist as Seen by the General Practitioner. A. Rostenberg, New York.
179 How to Stamp Out Leprosy. A. S. Ashmead, New York.

177. **Diaphoresis in Ocular Diseases.**—According to Brav, the beneficial influence on the ocular processes is accomplished: (a) by enhancing and readjusting metabolic end-products and the elimination of deleterious toxic substances from the organism; (b) by the reestablishment of the equilibrium in the general circulation, removing all possible venous stasis and the purification of the blood itself by the elimination of circulating toxins, following the stimulation of the sweat glands and the direct effect on the vascular system; (c) by invigoration of the peripheral and central nervous system thus increasing the nutrition of the ocular tissues affected; (d) by its action on the lymphatics, stimulating absorption and thus carrying off the inflammatory products of the diseased part of the eye; (e) by the local stimulative effect of moist heat so important to the tissues and so essential in inflammatory processes.

Journal Arkansas Medical Society, Little Rock

February

180 Neuroses Due to Pelvic Disease Surgically Treated. W. C. Dunaway, Little Rock.
181 Malignant Malaria (Comatose Form). F. O. Mahoney, Huttig.
182 Race Suicide as the Medical Man Sees It. E. E. Barlow, Dermott.
183 Address for the Relief and Control of Tuberculosis at Pine Bluff. J. Jordan, Pine Bluff.
184 Pellagra: Steps Taken to Control the Disease in Illinois. G. A. Zeller, Peoria, Ill.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

March 5

1 The Esthetics of Anesthetics. F. W. Hewitt.
2 *Streptotrichoses and Tuberculosis. A. G. R. Foulerton.
3 Intracranial Tumor with Alterations in the Color Fields. B. Branwell.
4 *Treatment of Tuberculous Abscesses of Bony Origin by Conservative Methods. H. J. Calve and G. J. Gauvain.
5 *Variations of Temperature in Pulmonary Tuberculosis During the Menstrual Period. C. G. Welch.
6 *Proctopexy: A New Operation for Prolapse of the Rectum. J. P. L. Mummery.
7 Medical Treatment of the Poor. J. C. McVail.

2. **Streptotrichoses and Tuberculosis.**—In the course of an investigation of 53 cases of streptotrichoses in man, Foulerton found 6 distinct species of parasites. In one case it was easy to identify the streptothrix described by Eppinger; and from other cases he isolated 5 distinct species which he has not been able to identify positively with previously described parasites. The influence of occupation and other circumstances involving special exposure to the possibility of infection from a vegetable source is noticeable in this series. Of 27 persons belonging to the working classes, 19 followed trades in which they would be specially exposed to any infection which might have its source of origin in vegetable matter. Thus there were among them 5 men employed in stable work; of these, 1 had a primary pulmonary streptotrichosis and died with a secondary abscess in the cerebrum, another had a streptotrichial empyema secondary to a lung infection, 2 had abscess in the submaxillary region, and 1 had an abscess in the substance of the cheek. A patient with a streptotrichial appendicitis was a cellarman who was constantly handling the straw casings of wine bottles, and who happened also to live over some stables. Two of the patients were bakers, one with a subperiosteal abscess of the lower jaw, and one with a right iliac abscess which presumably was secondary to appendicitis. Two of the patients were gardeners, both with abscesses of the submaxillary region. Two other patients whose occupation would expose them to the risk of infection of this kind were a dairy maid, who suffered from a submaxillary abscess, and

a man with a streptotrichial appendicitis who had been employed for many years in a large timber yard.

Among these 19 workers, who by reason of their occupation might be supposed to be specially liable to infection of this kind, there was a group of 7, including 2 working tailors, 3 tailoresses and 2 dressmakers, who would be in the habit of passing cotton and thread between their lips. Of these the 2 tailors each had a submaxillary abscess; the 3 tailoresses suffered respectively from a pulmonary streptotrichosis, an acute parotid abscess, and a submaxillary abscess; one dressmaker died with thrombosis of the superior mesenteric, splenic and portal veins resulting from a streptotrichial appendicitis, and the other had a submaxillary abscess. The remaining 8 of the working classes followed as many different trades, in none of which could any probable cause of any special liability to exposure to infection be traced. In 2 other cases, one that of a woman medical student who died with extensive retroperitoneal suppuration following on a streptotrichial appendicitis, the second that of a young male of no special occupation who died with infection of the lungs, liver and cerebrum—there were circumstances of interest in connection with the probable source of infection. The woman had spent a long holiday in the country ending 3 months before the onset of symptoms of appendicitis, and while away had been in the frequent habit of chewing ears of growing barley and oats as she walked through the fields. The male patient died within 4 months of leaving a farm on which he had spent several weeks during convalescence after scarlet fever.

4. **Treatment of Tuberculous Abscesses.**—The combined mixture which Calve and Gauvain use for injection into cavities after aspiration is of this formula: Iodoform, 5 grams; ether, 10 grams; guaiacol and creosote, 2 grams of each; and sterilized olive oil, 100 c.c. Of the other solutions of iodoform, iodoform combined with ether is most commonly used. Out of 29 cases of spinal caries with abscesses, 27 were cured, 2 remain with sinuses which are not infected and in which the discharge is diminishing and the general condition is good. There were 33 cases of hip disease; of these, 32 patients were cured, 1 remained with a sinus. In this case, the sinus was serious, due to a secondary infection caused by improper sterilization of the instruments employed in aspiration. The number of aspirations was from 1 to 21 in each case. At the Cripples' Home at Alton, during the last months of 1909, 23 closed tuberculous abscesses connected with lesions in the spine, hip and knee have been treated by aspiration; 8 spinal abscesses were aspirated. The greatest number of aspirations required for any one case was 12, the average number required was 3. All the patients are apparently cured, and in no case has a sinus formed. Thirteen cases of abscess in connection with tuberculous disease of the hip were treated by aspiration. Of these 12 patients had been apparently cured. In one case, a small sinus persists, but is not infected. The greatest number of aspirations required for any one case was 14. The average number was 4. Two abscesses in connection with the knee-joint have been similarly treated, and both patients are apparently cured.

5. **Phthisis and Menstruation.**—The changes associated with pulmonary tuberculosis were found by Welch to be progressively more marked in proportion to the severity and extent of the disease. Thus in early cases the changes most frequently found are a depression in the temperature, somewhat more marked but otherwise similar to that occurring in the healthy woman, except that the temperature falls on the first day and not on the day preceding the flow; and, further, the progressive and preliminary rise in the intermenstrual period appears to occur but rarely, being present in only three of his cases. In patients with two lobes affected a definite rise occurs in more than half of them while in women with three or more lobes affected a simple depression occurs in only 14.2 per cent., a rise of 57 per cent. Welch was unable to trace any definite variation of pulse rate and respiration with these changes of temperature. In like manner the amenorrhea that is so well-recognized as a sequel of this disease is found to increase progressively in proportion to the extent and severity of the disease. In early cases it occurred in 11.9 per cent., in the two-lobed in 23.7 per cent., while in the severe and advanced it occurred in as many as 62.5 per cent.

6. **Proctopexy.**—The operation devised by Mummery so anchors the rectum as to render impossible any possibility of the posterior rectal wall prolapsing. A transverse incision about 2 inches long is made about half way between the tip of the coccyx and the posterior margin of the anus. This incision should divide the attachment of the external sphincter to the coccyx and should be carried down until the posterior rectal space is opened. With the gloved finger this space is freely opened up. The height to which the posterior rectal space should be separated depends on the length of the prolapse, but in any case it should be well up into the hollow of the sacrum. The end of the gauze is left protruding from the wound which must be left open. A lot of gauze must not be pushed in, but only just sufficient to prevent the rectum and the tissues on the front of the sacrum from healing together by primary union. The external wound is carefully dressed, a piece of gauze being placed in the anus to prevent the dressings from becoming soiled. Mummery has performed this operation four times with complete success. In each case about five inches of the bowel came down previous to operation. The advantages claimed for this operation are: (1) It securely and permanently fixes the whole posterior rectal wall into the hollow of the sacrum; (2) it is simple and does not involve any serious risk; (3) it does not involve the cutting of any nerves or important structures; and (4) it restores the bowel to as near the normal condition as is possible.

British Medical Journal, London

March 5

8 *Optic Neuritis, Choked Disc, or Papilledema. Sir V. Horsley.
9 *Miner's Nystagmus. T. H. Butler.
10 *Muscular Dystrophy (Erb's Juvenile Form) Occurring in an Adult. H. L. McKisack.
11 *Action of Cutaneous Anesthetics. A. R. Short and W. Salisbury.
12 *Infantile Glaucoma or Buphthalmia. W. Allport.
13 A Case of Cyclophoria. A. A. Bradburne.
14 A Trial of Nastin. J. A. Thompson.
15 *Peritoneal Blood Transfusion. A. E. Boycott.

8. **Optic Neuritis or Papilledema.**—Horsley holds that the maximal intensity and age of papilledema or optic neuritis in cases of increased intracranial tension is of the highest value in clinical localization of the lesion, and is ipsolateral with the maximal pressure effects of the latter. Papilledema produced by increased intracranial tension commences at the upper border of the optic papilla, and invades last the inferior temporal quadrant. Horsley agrees with Mr. Gunn that the macular figure is caused by tension lines centered at the fovea, the greatest stress being just beneath the intima. The phagocytes of the retina, he says, consist of several kinds, as follows: (1) Wander-cells; (2) connective tissue corpuscles; (3) epithelioid corpuscles of the nerve fiber layer; (4) epithelioid corpuscles of the outer granule layer—the two latter varieties being in close relation to the supporting fibers of Müller.

9. **Miner's Nystagmus.**—Butler agrees with Reid and Nuel that the disease is caused by a disordered cerebration, a defect in the brain, not of the eye muscles. It is produced by the peculiar work of the miner, long-continued rhythmic movements of the pick in comparative darkness. The treatment is simple. The miner must leave the mine, and must not return to it. The prognosis must be guarded. Many patients recover completely, but, on the other hand, some never entirely lose their symptoms. In any case, a miner who has once suffered from the disease must never return to work underground.

10. **Muscular Dystrophy in an Adult.**—A "plater" in a shipbuilding yard, aged 28, had been accustomed to severe muscular exertion, particularly of the arms and back. He was a total abstainer, and had had no serious previous illnesses, except a suppurating inguinal gland, which he attributed to an injury; he denied having had any venereal disease. About two years before McKisack saw him he noticed some weakness of the arms, but soon afterward observed that his neck seemed smaller than before. These defects steadily progressed until his condition on Oct. 13, 1909, had become as follows:

Mental faculties and the sensory apparatus are unchanged; pupil reflexes are normal; left knee-jerk is brisk; right knee-jerk is defective; wrist-jerks are absent; fundus oculi is normal; the blood shows a positive Wassermann reaction. The muscles of arms and shoulders are atrophied and weak. There are no fibrillary twitchings. There was atrophy of the latissimus dorsi, lower part of the pectoralis major and supinator longus, with escape of deltoid, infraspinatous and hand muscles—a characteristic picture of the juvenile type of muscular dystrophy. The muscles of the legs, pelvic girdle and lower back are intact.

Landouzy and Dejerine's type may be excluded by the complete absence of face lesion. The deltoids and infraspinati may possibly be regarded as hypertrophied, but this is probably a genuine hypertrophy from overwork rather than the degenerative false enlargement, so that the group of pseudohypertrophic paralysis may also be rejected. Absence of fibrillary contractions and of characteristic electrical changes, together with the distribution of atrophy, remove this case from the group of spinal muscular atrophies. In spite, therefore, of the comparatively advanced age (26 years) at which the disease commenced, and of the absence of hereditary influence, McKisack believes that this case may be regarded as an instance of Erb's juvenile form of muscular dystrophy.

11. **Action of Cutaneous Anesthetics.**—The authors believe that they have been able to obtain definite evidence that none of the drugs at present in use for painting on, or rubbing into the skin have any power to relieve pain. The use of belladonna, opium, aconite, menthol and cocain for bruises, thrombosis, inflammation or neuralgia should therefore be discontinued and replaced by more efficacious means, such as rest, massage and counter-irritation.

12. **Infantile Glaucoma or Buphthalmia.**—The patient, a girl, when first seen, was 6 months old. Both eyes were constantly "running water." The corneæ were large, the globes slightly prominent, and the intraocular tension decidedly high. It was impossible to examine the fundi, owing to the intense photophobia. When the patient was 3 years old, Allport performed an interior sclerotomy, but the incision was extended so as to cut entirely through the upper part of the intercalary region. The knife as it emerged from the sclera above the cornea was not allowed to cut through the conjunctiva, but this membrane was undermined for a few millimeters, producing a bridge of tissue which held the flap-like portion of the cornea in position. The idea of this operation was to obtain a scar at the filtration angle, which would be sufficiently loose and porous to allow the intraocular fluid to escape through it under the conjunctiva, and so produce a permanent drain. A small cystoid cicatrix developed at the upper point of the incision, and a minute fistulous opening in the sclera at this point could be detected. The tension soon became normal, and the symptoms gradually abated.

In September, 1908, a similar operation was performed on the right eye, with an equally satisfactory result, and in December of that year, the intraocular tension of both eyes was normal, the photophobia had completely disappeared, and the child could see very much better. She could readily perceive a pin lying on the floor some yards away, and had accurate color perception. The fields of vision were not markedly contracted. The child presents now an almost normal appearance, the eyes merely resembling the slightly prominent globes of a myope; she no longer complains of any eye symptoms.

15. **Peritoneal Blood Transfusion.**—The observations made by Boycott suggest that intravenous transfusion is to be preferred to intraperitoneal transfusion, as giving a prospect of more lasting benefit to the recipient.

Practitioner, London

March

16 *Quiet Polypoid Sarcoma of the Nose. F. C. Madden.
17 Estimation of the Functional Activity of One or Both Kidneys. R. H. J. Swan.
18 *Failure of the Heart. E. H. Colbeck.
19 Treatment of Tuberculosis of the Knees. C. G. Watson.
20 Theory of Vaccine Therapy, with Practical Results. J. G. Taylor.
21 Treatment of Patients Before and After Abdominal Operations. H. J. Paterson.
22 Recent Work in Surgery of the Gall-Bladder and Bile-Ducts. H. Upcott.
23 Chronic Gonorrhea in the Female. C. D. Lochrane.
24 *Breast Pang. H. W. Verdon.

16. **Polypoid Sarcoma of the Nose.**—Under this term Madden describes a tumor whose structure is that of sarcoma, but of such a low grade of malignancy as to produce comparatively little surrounding destruction, after a prolonged period of growth. Clinically, the sequence of symptoms appears to be polypous formation in both nostrils, leading soon to complete nasal obstruction; expansion of the cartilaginous portion of the nose, with marked hypertrophy of the overlying skin; and, later, marked thickening and infiltration of the columella and upper lip, with, finally, but only after a very chronic course, extension to surrounding parts.

18. **Failure of Heart.**—Colbeck maintains that in spite of the extravagant advocacy of hydrotherapy and special exercises in the treatment of cardiac failure, there is no therapeutic influence that compares in efficacy with physical and mental rest. The carrying out of this principle does not necessarily entail complete rest in bed; each case must be considered in the light of surrounding conditions with the object of ensuring a maximum of relief to the heart with a minimum of disturbance to the patient.

The duration of the period of rest is determined by the response of the heart to this method of relieving the ventricle of its overwork, and it is of the utmost importance that the resumption of exercise should be graduated with the greatest nicety and caution, since a small indiscretion in respect to the introduction of strain may undo the beneficial effects of weeks of treatment. Drugs have little or no direct influence for good in the treatment of failure of the heart due to exhaustion of the function of contractility without loss of tonus, and their indiscriminate use may be a source not only of harm, but of actual danger. So long as the cardiac tonus is maintained, the employment of digitalis and its allies is absolutely contraindicated. The justification, if any be needed, for the occasional hypodermic injection of digitalis during an emergency in the treatment of cardiac failure without loss of tonus is apparently found in the initial effect of the drug on the function of contractility. With this exception, he declares, the action of digitalis in cases of cardiac failure without loss of tonus is wholly deleterious. The harmful effects of the drug are most commonly observed in those cases of failure of the heart without loss of tonus that are not uncommonly found in association with high blood-pressure and cardiovascular sclerosis. In these circumstances, the failing function of contractility is working up to the full limit of its reserve power, and the introduction of any depressing factor, such as a full meal, a slight effort or the action of digitalis, may be sufficient to cause sudden stoppage of the heart. In failure of the heart with loss of tonus, the very remarkable restoration of the cardiac tonus that is commonly effected by digitalis enables the heart to regain control of the collection and discharge of its contents, and thereby to reestablish the balance of the circulation.

So long as the heart is dilated digitalis may be given with safety and confidence, and the administration of the drug in suitable cases of cardiac failure constitutes one of the most satisfactory examples of therapeutic intervention in the whole range of clinical medicine. Failure of the heart to respond to the action of digitalis implies either permanent dilatation of the organ, due to the stretching of a texturally altered myocardium, or to grave functional degradation (consequent on toxemic poisoning, etc.) of the cardiac wall.

24. **Breast Pang.**—Cases not infrequently come under notice in which the prominent symptom complained of is dull pain of an intolerable sort felt in the upper third of the chest, sometimes extending to one or both arms, and sometimes rising in the neck as far upward as the angles of the jaw. Usually, at first, the pain comes on when the patient is walking on rising ground. In later stages and in severe cases it begins before 50 yards of level ground can be covered. Verdon has seen a few cases in which the patient could not walk from one side of the room to the other without provoking a seizure. The attack is accompanied by a small, quick, irregular pulse, extreme pallor, and a sense of inability and distress. Sometimes a feeling of gastric distention pre[illegible]s the painful sensation, and eructation of flatus relieves

them. With a few exceptions these cases are uncomplicated by the presence of constitutional disease or any discoverable local lesion. Verdon shows that there are reasons for the inference that contraction of involuntary muscles of the arterial wall occurs during these attacks, and that contraction of arterial muscle is the cause of the pain and other phenomena connected with the seizure.

Journal of Laryngology, Rhinology and Otology, London

March

25 Paralysis of the Recurrent Laryngeal Nerve. J. Broeckaert.

The Australian Medical Journal, Melbourne

January

26 Work done at the Women's Hospital, Melbourne. G. Cuscaden.
27 Scarlet Fever and Diphtheria. F. V. Scholes.
28 Radium and its Application. H. Lawrence.
29 Impressions of American Surgery. T. Murphy.
30 Three Cases of Calculi. O. Penfold.

Annales de Gynécologie et d'Obstétrique, Paris

February, XXXVII, No. 2, pp. 65-128

31 *Serodiagnosis of Pregnancy. (De la possibilité d'une toxémie villeuse et d'un séro-diagnostic de la grossesse, dans les premiers mois de la gestation.) G. Fieux and P. Mauriac.
32 *Acute Thyroiditis in Puerperal Infection. P. Lecène and Metzger.
33 *Hemostasis in Hysterectomy. (L'hémostase dans l'hystérectomie abdominale totale, l'hystérectomie subtotale ou en deux temps.) L. Chevrier.

31. **Early Serodiagnosis of Pregnancy.**—Fieux and Mauriac report research which seems to demonstrate that the young chorionic villi have a toxic action which induces the production of an antibody that can be revealed by the deviation of the complement in the hemolytic test. The vigorous growth of the chorionic villi during the first weeks of pregnancy seems to suggest that they possess certain features of a true parasitic graft, which may grow to a malignant tumor when the attack is too lively or the defense inadequate. This idea of syncytium intoxication from deportation of villi has been suggested as the origin of eclampsia. But the accidents due to the autointoxication of pregnancy are more severe as term approaches, while the growth of the villi becomes less and less active as the pregnancy continues. These and other facts observed suggest, they believe, that the villi may be responsible for the early toxemia; this assumption is sustained by the fact that the disturbances which mark the onset of gestation occur early; they disappear suddenly and completely if the ovum is expelled, extracted or dies; they subside and generally vanish completely by the close of the third or fourth month, but they may persist and with exceptional intensity in certain pathologic conditions of the ovum, with a vesicular mole, for instance. This, the authors assert, confirms the fact that in this toxemia the ovum rather than the embryo is concerned. In their experience, it was not in true pregnancy, but in cases of vesicular mole with proliferation of the villous element that the vomiting and cachexia were most pronounced. They apply the hemolytic test with an antigen made from villous masses derived from a two-months human ovum, taken from a patient with uncontrollable vomiting. With this and similar antigens they tested 55 pregnant women and obtained positive results in every case of pregnancy of two or three months' duration. The findings were negative in all the cases of pregnancy under one month and over four as also in 10 non-pregnant women, the latter including several with amenorrhea suggesting a possible pregnancy. The research described seems to establish, they think, the existence of an actual villi toxemia with a biochemical reaction permitting a serodiagnosis of pregnancy during the second and third month.

32. **Acute Thyroiditis in Puerperal Infection.**—Lecène and Metzger report a case in which a suppurative process developed in the thyroid a few days after delivery. The patient was 41 years old, a vii-para, and there had never been any disturbance in the thyroid. Prompt recovery followed incision and drainage of the abscess. A streptococcus was found in the lesion, the puerperium having been febrile. In a number of cases summarized from the literature the thyroiditis subsided under mild medical measures; in some cases the disturbances were ascribed to sore throat. The connection between the thyroid and the genital apparatus explains, they remark, the peculiar susceptibility of the thyroid to infection during the puerperium.

33. **Hemostasis in Hysterectomy.**—Chevrier gives an illustrated description of the technic which he advises, showing how to incise the vagina, etc., in regions free from blood vessels.

Annales de l'Institut Pasteur, Paris

January, XXIV, No. 1, pp. 1-80

34 *Agglutination and Seroreaction in Sporotrichosis, Actinomycosis and Thrush. (Sérodiagnostic mycosique. Applications au diagnostic de la Sporotrichose et de l'Actinomycose' Les coagglutinations et cofixations mycosiques.) F. Widal, P. Abrami, E. Joltrain, E. Brissaud and A. Weill.
35 Serotherapy in Cholera. (Le choléra à Saint-Petersbourg.) A. T. Salimbéni.
36 *Seventh Annual Campaign against Malaria in Algiers. (Etudes épidémiologiques et prophylactiques du paludisme.) E. and E. Sergent.

34. **Agglutination and Seroreaction in Mycoses.**—It seems evident from the research and experience reported that it is possible to differentiate actinomycosis by agglutination and the fixation of complement test using for the purpose spores of the sporotrichum; the actinomyces does not respond to the tests but there is a generic reaction with the spores of the allied sporotrichum. The latter can be easily cultivated and separated. The reactions also occur constantly in thrush with these spores, but there is no reaction in ringworm or aspergillosis.

36. **The Campaign Against Malaria.**—Sergent estimates the intensity of malaria in a place by what he calls the endemic index, that is, the percentage of malarial individuals who have much enlargement of the spleen. He here reviews the systematic campaign against malaria in Algiers in 1909.

Annales des Mal. des Org. Génito-urinaires, Paris

January 15, XXVIII, No. 2, pp. 97-192

37 *Urethral Stricture. (Traitement des rétrécissements de l'urétre.) Batut.
38 *Calculi in the Ureter. (Des calculs de l'uretére.) E. Jeanbrau. Commenced in No. 1.

February 1, No. 3, pp. 193-288

39 *Chyluria. G. Marion.
40 Pathology of the Posterior Urethra. Michailoff.
41 *Circular Electrolysis. (Nouveaux procédés d'électrolyse circulaire.) L. V. Girolamo.
42 *Six Cases of Retrograde Catheterization of the Urethra. (Cathéterisme rétrograde hypogastrique.) M. Hache.

37. **Urethral Stricture.**—After reviewing the field in general, Batut reports the details of six unusual cases from his own experience as army surgeon. In one an obstinate stricture in the anterior urethra was the result of infection after circumcision; in another the stricture was due to a probably congenital membranous growth. Urethrotomy, both internal and external was required in all but one case in which linear electrolysis answered the purpose, with progressive dilatation for a recurrence ten years later.

38. **Stone in the Ureter.**—This profusely illustrated article is an abridgement of an address prepared for the last French urologic congress. Jeanbrau has compiled 239 cases of calculi in the ureter removed by operative intervention or expelled after catheterization (53 cases). Immediate and complete recovery can be counted on, he states, if the patient is capable of bearing general or spinal anesthesia and the operation is not done during anuria. A fistula need not be apprehended if the permeability of the ureter throughout its entire length is determined after extraction of the calculus. The mortality in the cases on record was 1.66 per cent. In examining, after subsidence of the attack of pain, a tender point should be sought along the ureter above or near the umbilicus, at the intersection of a vertical line passing through McBurney's point and a horizontal line passing through the umbilicus; a second tender point is at the intersection of a line uniting the crests of the ilium and a vertical line through the pubis. The point where the ureter enters the bladder is also liable to be tender. In only 2 cases was the calculus discovered by abdominal palpation, but palpation through the vagina usually gave instructive findings, especially when the patient was examined standing. In 13 cases the calculus was palpated through the rectum. In 29 cases cystoscopy permitted the true diagnosis when the symptoms seemed to locate the trouble in the kidneys or bladder. In all the cases reviewed recurrence was known in

only a single instance and this may have been merely that a stone was overlooked at first.

39. **Chyluria.**—Marion's patient was a man of 58 who had had gonorrhea in youth and occasional bronchitis. Recently the night urine has appeared milky and he has lost 23 pounds in weight. The day urine is clear but on reclining the urine is at once milky. The milky urine always comes from the right ureter. Bacteriologic tests are negative and there is nothing to suggest the possible presence of filariosis. A fistula from rupture of a lymphatic into the urinary passages is probably the most frequent cause, although secretory renal chyluria is not an impossible assumption. This case seems to favor the assumption of a communicating fistula, and treatment along this line has been instituted, a silver nitrate solution being instilled into the ureter and renal pelvis to promote the healing of the assumed fistula.

41. **Circular Electrolysis in the Urethra.**—Girolamo has found that the negative electrolysis has first a vasoconstricting and then a vasodilating action, followed by the formation of a soft eschar. The tissues of the urethra soften and become permeable for the cauterizing action on the points influenced by the electrode. The olive-shaped metal electrode should be a little larger than the largest caliber sound that can pass through the stricture; immediately after the electrolysis he introduces other electrodes, of increasing caliber, having a set of olive-shaped tips of various sizes. The urethra should be cocainized beforehand and the current should not be over 5 or 6 milliamperes during the five minutes it is used. After the dilatation he massages the region of the stenosis still under the influence of the current. This forced and rapid dilatation, he asserts, puts an end to the retention and hastens the cure. The electrolytic action is limited to the spot where it is needed, and can be done with and without the endoscope. The superposed massage utilizing the electrolytic ionization is an important factor in the rapid cure.

42. **Retrograde Catheterization of the Urethra.**—Hache reports 6 cases interesting from the multiplicity and severity of the lesions. In 2 cases there was a sliver of bone in the urethra from a fracture of the pelvis; in one the prostatic urethra had been torn out; in another 2 accidents at 20 years' interval involved the urethra; there was also a calculus in it.

Annales de Médecine et Chirurgie Infantiles, Paris

February 1, XIV, No. 3, pp. 73-108

43 *Spasmodic Paraplegia in Children with Inherited Syphilis. (Forme de paraplégie spasmodique d'origine hérédo-syphilitique chez l'enfant.) A. B. Marfan.
44 Blood in the S[illegible] the Intestines in Young Children. (R[illegible] les selles en pathologie intestinale.)
45 Staphylococcus [illegible] E. Weil and G. Mouriquand.

43. **Spasmodic Paraplegia in Children with Inherited Syphilis.**—In the case described by Marfan, the patient was a boy nearly 9 years old who was able to walk very slowly without support, but with a dragging gait, balancing himself first on one foot and then on the other. The entire limb was stiff, the hip, knee and ankle scarcely bending at all, the toes dragging and hitting against obstacles and the knees touching. He can walk in a straight line, however, without staggering, and closing the eyes does not increase the trouble in walking. When reclining, the paraplegia is less marked, and passive movements of the joints are possible. The tendon reflexes are exaggerated, and the Babinski and other signs indicate some lesion in the pyramidal tract in the dorsolumbar spinal cord. There are no sphincter disturbances or trophic lesions but the Argyll-Robertson sign is positive and the child is mentally backward. Marfan ascribes the trouble to inherited syphilis and advises commencing specific treatment at once in such a case without waiting for certainty as to the inherited taint. In his case treatment was not commenced until fifteen months after appearance of the first symptoms, and this delay was probably responsible for the entire lack of improvement under energetic mercurial treatment for eighteen months. The diagnosis was first rendered certain in this and another case by development of parenchymatous keratitis; this soon subsided under the specific treatment. The paraplegia in question generally develops late, at the age of 4, 5, 7 or 12 years in the cases he has encountered. The affection is much like that of syphilitic spinal paralysis in adults except that the sphincters do not seem to be affected.

Archives des Mal. de l'App. Digestif, Paris

January, IV, No. 1, pp. 1-48

46 *The Mathieu Indirect Method of Estimating Amount of Stomach Content. (Valeur de la méthode Mathieu-Rémond pour la détermination indirecte du volume de liquide contenu dans l'estomac.) A. Mathieu and Taillandier.
47 Coexistence of a Basement-Celled Epithelioma in the Esophagus and a Cylinder-Celled Epithelioma in the Stomach. (Les cancers multiples du tube digestif.) E. Parmentier and E. Chabrol.
48 *Parotitis during Medical Treatment of Gastric Ulcer. (Des parotidites survenant au cours de la "cure de repos stomacal absolu.") R. Gaultier.

46. **The Mathieu Method of Determining Amount of Stomach Content.**—Mathieu states that the experiences of the fifteen years since he introduced this method have confirmed its reliability. The principle is the comparison of the degree of acidity of the stomach content before and after dilution with a given amount of water. Laboulais and Goiffon have recently simplified the technic considerably. They use a titrated solution of sodium phosphate; after this is poured into the stomach and well mixed with the contents they withdraw some, and from its dilution then they estimate the amount of fluid present in the stomach.

48. **Parotitis During Treatment for Gastric Ulcer.**—Gaultier has encountered 2 cases of bilateral parotitis developing during dietetic treatment of gastric ulcer. He has found records of 21 other cases, including 4 with suppuration, fatal in 2 cases; one of his patients was in this last group. The suppression of the salivary secretion is manifestly the cause of infection of the glands, and during withdrawal of all food by the mouth measures must be maintained to keep the salivary glands functioning, or the contents of the excretory duct may be massaged out several times a day. Expression of this duct has recently been recommended in treatment of infectious angioparotitis, and it probably would prove effectual in prophylaxis. Merely keeping the mouth moistened and giving the patient scraps of ice have not proved effectual alone.

Archives de Médecine des Enfants, Paris

February, XIII, No. 2, pp. 81-160

49 *Pathogenesis of Rachitis. (Le rachitisme.) V. Hutinel.
50 *Study of the Temperature in Scarlet Fever. (Thermosémélologie de la scarlatine.) J. Barannikow.
51 The Deceptive Abdominal Onset of Certain Diseases of Children. (Cas de rougeole débutant par des symptomes abdominaux.) Oelsnitz.
52 Roseola in Cerebrospinal Meningitis. E. Merle.

49. **Rachitis.**—Hutinel regards a quantitative modification of the bone marrow as the essential feature of rickets. The qualitative changes are like those encountered in ordinary infections, he states, but the remarkable proliferation of the bone marrow seems to be specific for rachitis. The bone tissue also displays a tendency to evolutive dystrophy, which is also evident, although to a lesser degree, in all the tissues. This dystrophy may even involve the suprarenals, thymus, etc., but the anomalies in the glands may be regarded as the result of the nutritional disturbance responsible for the bone lesions, rather than as themselves the cause of the rachitis. The dystrophies that develop at puberty are akin to those in young children, both being in periods of exceptionally active nutrition. Pregnancy is another such period, and dystrophies are also liable to occur at these times, but they do not take the form of rachitis but of osteomalacia; the lesions are different according as the tissues are immature or adult. The primal disturbance responsible for the rachitis may include microbian, toxic and dystrophic factors, associated or superposed. For example in a child with a tendency to rachitis from defective feeding, other causes, such as an intercurrent infection, may conspire to aggravate this tendency.

50. **Study of Temperature in Scarlet Fever.**—Barannikow believes that it is possible to determine the prognosis early in scarlet fever by the temperature curve, and he gives the findings in 209 cases, comparing them with the composite

curves made out retrospectively from the mild, the moderate and severe cases. A deep fall in temperature between the third and thirteenth day was characteristic of every epidemic observed. It may occur suddenly or the temperature may be two or three days in declining. This fact is important in estimating the action of serotherapy. In his experience, scarlet fever developing in the course of whooping cough was always exceptionally *mild.* He could not discover any connection between the duration of the fever and heart complications, but such was unmistakable between inflammation of the tonsils and the heart complications as well as with the general symptoms—all being more severe the more intense the tonsillitis, but no connection of the kind could be discovered with the nephritis.

Lyon Chirurgical, Lyons

February, III, No. 2, pp. 129-256

53 *Research on Anatomy of the Small Intestine and its Mesentery. (Notes d'anatomie sur l'intestin grêle et le mesentère.) A. Latarjet.
54 *Echinococcus Disease of the Lung. (Kyste hydatique double du poumon droit.) H. Albertin and F. Barjon.
55 *Eight Cases of Laryngostomy with Dilatation. C. Viannay. Commenced in No. 1.

53. **Anatomy of the Small Intestine and Mesentery.**—Latarjet gives an illustrated description of various points in regard to the anatomy of the small intestine and its mesentery, seeking to locate the special loop of the intestine under examination and its possible torsion from the findings in regard to the arteries and veins and fat deposits.

54. **Echinococcus Cyst of the Lung.**—In the case reported one cyst was in the apex and another in the base of the same lung; both were readily shelled out, with the complete recovery of the patient, a woman of 40. She had suffered from cough and labored breathing for about six months; after three months revulsion had been applied to the chest for pleurisy. She had lost nearly 25 pounds in weight but there were no night sweats and no pain until the last two weeks when there had been intermittent sharp pains in the right side and liver region. Roentgen-ray examination revealed the two tumors, and first one and then the other, ten months later, were successfully removed, two or three ribs being resected each time. There was a history of urticaria seven years before, and this first suggested the possibility of echinococcus disease; the urticaria may have been due to elimination through the skin of the poisons generated by the parasite in the blood, the elimination ceasing as the parasite located in the lung and became encysted. There was no hemoptysis at any time.

55. **Laryngostomy with Dilatation.**—All of Viannay's 8 patients are in good health to date except that one patient succumbed to an accidental pneumonia six months later. He reviews the cases in detail with the technic. He prefers to close the wound definitely at once when possible.

Lyon Médical, Lyons

February 6, XLII, No. 6, pp. 269-336

56 *[illegible] Prognosis of Uremia by Amount of Urea in [illegible] Fluid. J. Froment.

13, No. 7, pp. 337-392

57 Treatment of Vaginal Cystocele or Preuterine Hernia. H. Violet.

56. **Urea Content of Cerebrospinal Fluid in Uremia.**—Froment tabulates the findings in regard to the proportion of urea and chlorids in the different organic fluids in 18 cases of various affections with more or less uremia. Of all the changes in the cerebrospinal fluid in case of uremic poisoning of the nervous system, an increase in the proportion of urea is the most constant and the most instructive. Even 1 per cent. is suspicious, but with more than this, uremia is beyond question, and with 4 per cent. the prognosis is inevitably fatal. The uremia is seldom fatal when the proportion is only 1 or 2 per cent., except possibly in children with acute nephritis. The urea content in the other organic fluids is less constant and not characteristic.

Presse Médicale, Paris

February 23, XVIII, No. 16, pp. 137-144

58 Tuberculosis in Origin of Rachitis. (Rachitisme et Tuberculose.) A. B. Marfan.
59 Dosage of Suprarenal Preparations. (Posologie de l'adrénaline.) L. Bernard.

Revue de Médecine, Paris

February, XXX, No. 2, pp. 81-152

60 *Scarlet Fever. (La scarlatine à l'hôpital Claude-Bernard in 1908. II.). A. Gouget.
61 *Hemophilia III. P. Nolf and A. Herry.
62 Farm Colonies for Epileptics, etc. (L'assistance spéciale des épileptiques et débiles adultes par le retour à la terre.) A. Marie.
63 Distribution of Sugar in Elements of Diabetic Blood. (Repartition du sucre dans le plasma et les globules du sang chez un diabétique.) R. Lépine and R. Boulud.

60. **Scarlet Fever.**—Gouget describes the erosive or ulcerative type of sore throat which he encountered in 48 of the 858 cases of scarlet fever at the isolation hospital in 1908. In the 28 cases with ulceration, 11 of the children died and the survivors all developed otitis or other serious complication. No local measures displayed any efficacy. He also reviews the other complications observed. The total mortality in the 858 cases was 30.

61. **Peptone to Arrest Hemophilic Hemorrhage.**—In 9 cases hemophilic hemorrhage was arrested by injection of 10 c.c. of a 5 per cent. solution of peptone (Witte). In some of the cases 2 injections were made as a prophylactic measure the first 10 and the second 2 days before a major operation. In one case hematuria was arrested by one injection; the patient succumbed to hematemesis a year later. The patients were between 6 and 67 years old, and a single injection answered the purpose in nearly every case. The peptone seems to be more energetic and it is more easily sterilized than serum; heating to 120 C. (248 F.) for an hour does not alter its properties. It is injected as a 5 per cent. solution in a 0.5 per cent. solution of sodium chlorid. There seems to be no danger of anaphylaxis. For local application an extract of lymphoid organs, spleen, lymph glands and thymus, seems to be as effectual as fresh serum. The extract can be made with organs from the slaughter-house by triturating them with a little sand, adding to 1 part of the gland 2 parts of a 0.09 per thousand sodium chlorid and 0.5 per thousand calcium chlorid solution, and then straining. The action and effect of the peptone seems to be identical with that of fresh serum, but judging by the experiences to date, the authors state, the action seems to be much more pronounced.

Semaine Médicale, Paris

March 2, XXX, No. 9, pp. 97-108

64 *Advisability of Surgical Intervention for Cystic Degeneration of the Kidney. (Faut-il opérer le rein polykystique?) F. Lejars.
65 *Is Hegar's Sign Pathognomonic of Pregnancy? (Le signe de Hegar est il pathognomonique de la grossesse?) R. de Bovis.

64. **Indications for Operation in Cystic Degeneration of the Kidney.**—Lejars regards nephrectomy as justified in case of suppuration, pain, hematuria or intracystic hemorrhage, if the condition of the other kidney permits. Cystic degeneration is generally bilateral but it may be in an initial stage in the second kidney and thus allow long survival after the nephrectomy, as the process is of very slow development. Unless there are severe symptoms, however, he does not advise nephrectomy as the kidney may retain for many years functional capacity sufficient to ward off severe symptoms even when in advanced cystic degeneration. He removed three years ago a polycystic tumor which he supposed was the kidney but which proved to be of pararenal origin; both kidneys were also in polycystic degeneration as was discovered at autopsy not long afterward. Differentiation even during the operation may be difficult. In another case he found a knobby, blackish cystic tumor originating in the lower end of the kidney. Supposing that the trouble was general cystic degeneration of the organ, and not knowing the condition of its mate, he did not dare to remove the kidney but resected it into sound tissue and the patient recovered. The tumor proved to be an epithelioma. Palliative operations on cystic kidneys are attended with great risks, he declares, and should never be done except under compelling indications, but then may give great relief.

65. **Hegar's Sign of Pregnancy not Reliable.**—De Bovis asserts that softening of the isthmus of the uterus cannot be regarded as pathognomonic of pregnancy as it has been encountered with a myomatous uterus. The softening may vary widely in intensity, extent and location. Hemorrhages should not be accepted as evidence for or against the presence

of a myoma. In three cases in his experience the women had hemorrhages more or less continuously for one, three and five months and were then delivered of a dead or living fetus; no trace of a myoma could be discovered.

Deutsche medizinische Wochenschrift, Berlin

February 24, XXXVI, No. 8, pp. 345-392

66 *"Inflammatory" and "Real Lithogenous" Jaundice. (Entzündlicher und reell-lithogener Ikterus.) B. Riedel.
67 *Collective Investigation by the Imperial Health Office on Tuberculosis from Milk. (Die Sammelforschung des Kaiserlichen Gesundheitsamtes über Milchgenuss und Tuberkulose.) H. Kossel.
68 Transformation of Biologically Important Properties of Bacteria. (Beobachtungen über die Umwandlung biologisch wichtiger Eigenschaften von Bakterien.) G. Sobernheim and E. Seligmann.
69 Psychosis from Meat Poisoning. (Fall von Psychose nach Fleischvergiftung.) M. Raether.
70 Paratyphoid Bacilli and Meat Poisoning. (Paratyphusbazillen und Fleischvergiftungen.) H. König.
71 *Influencing of Cardiac Neuroses by Cauterization of Nose. (Zur nasalen Beeinflussung der Herzneurose.) A. Koblanck.
72 To What Extent can Local Supplant General Anesthesia? (Inwieweit vermag bereits jetzt die Lokalanästhesie die Allgemeinnarkose zu ersetzen?) F. Hesse.
73 Modified Technic for Stovain Spinal Anesthesia. (Ein neues Verfahren bei Anästhesie durch Rhachistovainisierung.) A. Poenaru.
74 Behavior of Placenta and its Manual Separation. (Verhaltung der Plazenta und ihre manuelle Lösung.) Naumann.
75 Seroreaction in Cadavers. (Leichensera und die Wassermannsche Syphilisreaktion.) R. Krefting.

66. **Inflammatory and Lithogenous Jaundice.**—Riedel emphasizes the necessity for differentiating jaundice resulting from the presence of stones in the gall-bladder or cystic duct, which he calls the inflammatory form, and that resulting from a stone in the common bile duct, the real lithogenous form. He cites a number of examples to confirm his assertion that a patient with inflammatory jaundice cannot be operated on too quickly; a stone in the neck of the gall-bladder or in the cystic duct may be pushed along into the common bile duct, so that out of the hitherto harmless local affection a general disturbance may result. On the other hand, the patient with the real lithogenous jaundice should not be operated on at once at the first attack; the stones may be passed without further trouble. Only exceptionally serious infection compels immediate surgical intervention. In his experience with 600 operative cases of jaundice, in 80 per cent. of the cases the first attack of gall-stone colic was due to hydrops or infected hydrops in the gall-bladder; in 20 per cent. bile was found in the gall-bladder. About 57 per cent. of the patients had a primary large stone in the neck of the gall-bladder or cystic duct; in 43 per cent. there were numerous small stones. In about 90 per cent. of the cases in which the stones remained quietly in the bladder or cystic duct there was no jaundice. The majority of patients thus have no jaundice at their first attack of gall-stone colic, but in 10 per cent. of such cases there is jaundice even when the stone remains in the neck of the gall-bladder or in the cystic duct. The jaundice in this case is of inflammatory origin, although generally aseptic. It is the result of propagation of an inflammation from the gall-bladder to the liver. If the stone is high up in the cystic duct, it may compress and kink the lower biliary passage, thus superposing a mechanical element on the inflammation. In conclusion he reiterates that patients with violent attacks without jaundice and without passage of stones, and those with inflammatory jaundice should be operated on during the attack. With the real lithogenous jaundice commencing independently, conservative treatment is indicated unless severe infection compels rapid intervention.

67. Abstracted in the Berlin Letter in The Journal, March 12, 1910, page 886.

71. **Influencing of Cardiac Neurosis by Correction of Anomalies in the Nose.**—Koblanck gives the description of a case written by the patient himself, a physician, aged 31, who had suffered for years with a cardiac neurosis with attacks simulating angina pectoris. Removal of some polyps in the nose and electrolytic correction of an abnormal protruding part of the septum were followed by complete subsidence of all the trouble. The young physician had become convinced by his symptoms that a large part of them were due to participation of the sympathetic system. The benefit from direct treatment of the sympathetic fibers in the nose confirms this.

Fortschritte der Medizin, Leipsic

February 10, XXVIII, No. 6, pp. 161-192

76 *Menthol in Treatment of Pulmonary Tuberculosis. Stepp.

76. **Menthol in Pulmonary Tuberculosis.**—Stepp gave the menthol internally at first, but with disappointing results. Since then he has applied it in the form of inunctions, and reports good results. He uses a 30 or 40 per cent. menthol salve. Some of the salve is rubbed into the skin for ten minutes until it is entirely taken up, a different part of the body being anointed each time. He has never observed any inconveniences from the method but found benefit follow in the 14 cases in which he has applied this method of treatment perseveringly for four or five months. He gives the details of the cases. Improvement is evident, he asserts, after two or three weeks and continues to progress until the patients are practically cured, except in the more advanced cases and improvement is evident in every case. Acute tuberculosis either of lungs, glands, or bones, is not amenable to this treatment, but it is effectual in the infiltrations left after acute pneumonia in children. These relics of the pneumonia are generally tuberculous processes, and they yielded rapidly and completely to the menthol treatment in his 18 cases of this kind. He explains the action of the menthol as due to its elimination by the lungs after it has been taken up by the lymphatics; this enables it to act directly on the tuberculous tissue in the lungs. As this is absorbed, the walls of the cavity may sink in and the cavity thus become obliterated. It is even possible that a kind of autoimmunization may follow.

Medizinische Klinik, Berlin

February 20, VI, No. 8, pp. 293-330

77 Hypnotics and their Action. (Ueber Schlafmittel und ihre Wirkung.) S. Fränkel.
78 Pathogenesis of Otitic General Infection. W. Uffenorde.
79 Action of Iodin. (Ueber Jodwirkung.) A. Heffter.
80 Acute Articular Rheumatism after Operative Trauma of Nasal [illegible]
81 Im [illegible])
F. Dessauer.
82 Advantages of Rubber Ball Pessary in Treatment of Prolapse of the Vagina. (Ueber ring- und kugelförmige Pessare bei der Behandlung des Scheidenvorfalls.) M. Wunsch.

Monatsschrift für Kinderheilkunde, Leipsic

January, VIII, No. 10, pp. 585-656

83 Yolk of Egg in Infant Feeding. (Bedeutung der Eier als Bestandteil der Säuglingsernährung.) H. Vogt.
84 Congenital Bronchiectasia. J. Peiser.
85 Artificial Feeding of New-Born Infants. (Einiges über künstliche Ernährung von Neugeborenen im Spital und im Privathaus.) H. Scheible.
86 Fetal Fat. (Zur Kenntnis des Fötalfettes.) Engel and Bode.

Münchener medizinische Wochenschrift

February 22, LVII, No. 8, pp. 393-440

87 *Typhoid with Initial Hemorrhagic Exanthem. H. Curschmann.
88 *Congenital Diffuse Hydrops. (Angeborene allgemeine Wassersucht.) H. Schridde.
89 *Effect of Momburg Belt Constriction on the Ureters. (Ueber die Komprimierbarkeit beider oder nur eines Ureters mittelst elastischer Einschnürung des Abdomens.) O. Hoehne.
90 *Prophylaxis of Caries of the Teeth. (Zur Prophylaxe der Zahnkaries.) W. Herrenknecht.
91 *Change in Drop-Forming [illegible] tion—with Cancer. (Die [illegible] Geschwülsten.) M. Ascol [illegible]
92 *Behavior of Pupils in Young Infants. (Verhalten der Pupillen beim Neugeborenen und im ersten Lebensjahr.) H. Gudden.
93 Hemoglobinometer. ("Der Kolbenkeilhämoglobinometer," ein neuer Apparat zur funktionellen Hämoglobinbestimmung.) J. Plesch.
94 Toxic By-Effects of Arsacetin, [illegible] on the Kidneys. (Die t [illegible] Arsazetins, insbesondere die [illegible]

87. **Family Typhoid with Initial Hemorrhagic Exanthem.**—Curschmann reports the case of a mother and six children all coming down with typhoid at the same time and presenting on the second or third day a sudden eruption of petechial spots. The typhoid was mild and there was nothing to suggest true exanthematous typhus. The father of the family developed the disease two or three weeks after the others, with fatal ulceration in the intestines. He presented an eruption of hemorrhagic vesicles. The other patients recovered; constipation had been the rule in all but two.

88. **Congenital Hydrops.**—Schridde has encountered 3 cases in the last 5 years in which a general hydrops was associated with extreme anemia and enlargement of the heart. In 2 of

the cases the mothers had had severe nephritis. He is convinced that many cases which have been reported as pseudoleukemic anemia in an infant, have in reality been of this type. Examination of the blood in cases of congenital edema may throw further light on the condition.

89. **The Momburg Belt Constriction for Segregation of the Urine.**—Hoehne found that it is possible by applying a splint over half of the abdomen to protect this half against constriction by the rubber tubing wound around the waist according to the Momburg technic. This allows the ureter on the protected side to continue its functions undisturbed, while the ureter feeling the constriction is closed. This permitted instructive oversight of the functioning of the kidney and ureter on the protected side in rabbits, and suggests the possibility that the method may prove useful in clinical diagnosis. He found that the compression of the ureter by the Momburg belt induced injury of the kidney, with albuminuria and tube casts. These disturbances were transient in a case reported in detail in which the belt was applied for the purpose of inducing abortion. The latter was not realized, showing that the constriction does not shut off all the blood supply from the genital apparatus. The transient injury of the kidneys observed in this case suggests possible danger from this source if the constriction is kept up for a long time; half an hour should be the average.

90. **Care of the Teeth.**—Herrenknecht reviews bacteriologic research which shows that the normal bacterial flora in the mouth protects against the invasion of pathogenic germs under normal conditions. The bacteria do not injure the teeth unless their products are allowed to accumulate, in which case the acids generated by the bacteria cause the destruction of the teeth. The main point in the care of the teeth is therefore to insure the mechanical removal of these products and everything that may serve as nesting places for the bacteria. The most important measure is to rinse out the mouth with water or a weak salt solution; warm water is much more cleansing than cold. No bactericidal drugs are needed; they do direct harm as they injure the tissues; all that is necessary is the mechanical, forcible rinsing out of the mouth several times in succession after each meal. If a mouth wash is desired to aid in cleansing, and to leave a refreshing taste in the mouth, he prescribes a mixture of 0.2 part saccharin and 0.3 part peppermint oil in 100 parts alcohol. From 10 to 20 drops are to be added to a glass of warm water and the whole amount used to rinse the mouth. He rejects tooth powders as liable to injure the teeth from hard particles. Soap also has an injurious action. He advises having the teeth inspected several times a year after the age of three, and protests against pulling a molar or premolar tooth in a child's mouth; if absolutely necessary, the antagonist should be pulled too. This should be the rule up to the age of 18; the jaws will then develop symmetrically. Adults should have the teeth examined twice a year and in some cases oftener.

91. **The Meiostagmin Drop-forming Reaction in Cancer.**—Ascoli reports positive results in tests of the drop-forming property of the serum in cancer. In 29 cases of carcinoma and 2 of sarcoma there was a difference of from 4 to 8 drops after addition of the specific antigen, while in 28 control cases the number of drops showed no change. The meiostagmin reaction may thus prove a reliable sign of malignant disease if the experience of others confirms his findings.

92. **The Pupils in Young Infants.**—Gudden calls attention to the sudden and maximal dilatation of the pupils on sudden waking from sleep as a psychic reflex, possibly possessing some differential value for cortical affections, especially in infants.

Wiener klinische Wochenschrift, Vienna

February 24, XXIII, No. 8, pp. 274-308

95 Pharmacology and Clinical Medicine. (Pharmakologie und Klinik.) O. Loewi.
96 Primary Multilocular Echinococcus Disease in the Brain. (Ein primärer mehrherdiger Echinococcus multilocularis alveolaris des Gehirns.) E. v. Hibler.
97 Bacteriology of Urethritis in which no Gonococci can be Found. (Zur Aetiologie der gonokokkenfreien Urethritis.) K. Lindner.
98 Adrenalin not an Antidote to Strychnin. H. Januschke.
99 Dangers of Intravenous General Anesthesia. (Ueber die intravenöse Narkose.) P. Clairmont and W. Denk.
100 Special Action of Extracts of Tuberculous Guinea-Pig Organs. (Besondere Wirkung der Extrakte tuberkulöser Organe des Meerschweinchens.) R. Kraus and R. Volk.
101 Connection between Seroreaction and Mercurial Treatment in Syphilis. E. Epstein and E. Pribram.

Zentralblatt für Chirurgie, Leipsic

February 26, XXXVII, No. 9, pp. 313-352

102 *Treatment of Air and Fat Embolism. (Massnahmen bei Luft- und bei Fettembolie.) L. v. Lesser.
103 *Operative Separation of Horseshoe Kidney into two Parts. (Operativer Eingriff bei Hufeisenniere.) A. Martinow.
104 General Anesthesia from Intravenous Injection of Hedonal. (Ueber allgemeine Hedonalnarkose.) S. P. Fedorow and A. P. Jeremitsch.

102. **Treatment of Air and Fat Embolism.**—The Journal, Feb. 12, 1910, page 576, mentioned Schanz's method of injecting large amounts of salt solution in treatment of fat embolism causing convulsions in the course of orthopedic operations. Schanz explains the disturbances as the result of obstruction of the capillaries of the brain by the particles of fat. The saline infusion washes them along. Now von Lesser calls attention to his experimental experiences with air embolism; he found that the heart was unable to contract over air as the valves are meant to act on fluids and not on air. After the heart action had ceased after injection of air in the jugular vein, he was able to revive it again by direct injection of 0.5 per cent. salt solution directly into the right ventricle.

103. **Operative Separation of Horseshoe Kidney.**—In Martinow's case a nurse, aged 49, had complained since childhood of diagreeable pulsation in the abdomen and for some years had had typical pains above the umbilicus, and also constipation. The nerves had become more and more involved and the patient had been treated for hysteria for some years. Palpation revealed a tumor above the umbilicus, the entire region was very tender; at times the tumor increased in size and the pulsation in the region became more violent. The kidney region was not tender and all the other organs seemed to be normal. On the diagnosis of pancreas tumor or horseshoe kidney the abdomen was opened. The tumor lay on the aorta and united both kidneys. He severed this bridge between the kidneys, between two soft bowel clamps. This released the aorta as the two halves of the kidney separated and all disturbances ceased at once.

Zentralblatt für Gynäkologie, Leipsic

February 26, XXXIV, No. 9, pp. 305-336

105 Treatment of Old Tears in Vagina and Cervix uteri. (Zur Behandlung alter Scheiden- und Cervixrisse.) J. Voigt.
106 Statics of the Human Uterus and Its Gynecologic Consequences. (Die Uterusstatik bei der menschlichen Rasse und ihre gynäkologischen Folgen.) L. M. Bossi.
107 Shaving the Vulva as Preliminary to Delivery. (Der Ruf nach dem Rasiermesser bei der Geburt.) J. Reich.

Zentralblatt für innere Medizin, Leipsic

February 26, XXXI, No. 9, pp. 225-248

108 Substances in the Blood in Nephritis that Induce Mydriasis. (Vorkommen von mydriatisch wirkenden Substanzen im Blute von Nephritikern.) A. Wirz.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 17, XXXI, No. 21, pp. 217-224

109 Typhoid with Circulatory Complications from Infection from Oysters. (Infezione da ostriche.) M. Vivaldi.

February 20, No. 22, pp. 225-240

110 The So-Called Parasyphilitic Diseases. (A proposito delle affezioni cosi dette parasifilitiche.) F. Simonelli.

Policlinico, Rome

February 27, XVII, No. 9, pp. 259-290

111 Successful Pneumotomy for Echinococcus Cyst in Right Lung. E. Curti.
112 *Etiology of Pellagra. L. Verney.

February, Medical Section, No. 2, pp. 49-96

113 Fixation of Complement in Blood Serum and in Effusions as Sign of Tuberculosis. (Studi sul siero di sangue dei tubercolosi e sugli essudati delle cavita sierose a mezzo della deviazione del complemento e del anafilassi.) C. Frugoni.
114 *Pneumococcus in the Conjunctival Secretion in Acute Lobar Pneumonia. C. A. Crispolti. Commenced in No. 1.
115 *Registration of Respiratory Movements by Influence of Various Gases at Varying Pressure Injected into the Pleura. (Influenza di diversi gas a diverse pressioni sul pneumotorace chiuso.) S. La Franca.

February, Surgical Section, No. 2, pp. 49-96

116 Histopathology of Undescended Testicle. M. Fasano.
117 Behavior of Elastic Fibers in Hernial Sac and Staining Technic. (Comportamento delle fibre elastiche nei sacchi erniari e su di un nuovo metodo pentacromico.) R. Traina.
118 *Efficacy and Mechanism of Action of Bier's Constriction Hyperemia. (Iperemia da stasi alla Bier.) M. Almagia and G. Persichetti.

112. **Etiology of Pellagra.**—Verney emphasizes the fact that in Italy pellagra has followed the introduction and cultivation of maize and also that rainy seasons, with defective development of the grain, are followed by increased prevalence and severity of the disease, and, further, that the use of well dried and healthy maize has reduced materially the incidence of the disease. Another important fact is that the symptoms of the disease are analogous to those observed in other chronic intoxications such as poisoning by lead, phosphorus, arsenic, mercury and alcohol. The analogy is still closer with chronic alimentary intoxication such as from ergot poisoning, chronic favism, the *phlegma salada* of the Spaniards, attributed to spoiled wheat, the cachexia observed in Paris during the last siege, and other chronic disorders due to defective food. At the last Itelian neurologic congress, on the other hand, Mondino reported two typical cases of pellagra in persons who had never used maize, and Neusser in Roumania has also encountered individuals with pellagra who had never eaten maize. But Neusser discovered that his patients were in the habit of drinking brandy made from spoiled maize and Antonini confirmed this fact in his experience at Friuli. Verney and also Gosio claim that the theory of spoiled maize does not apply to all the cases of pellagra; some other etiology must be admitted for certain cases, and there is also a probability that a syndrome may be observed closely simulating pellagra which yet is not pellagra. The idea of an intoxication, moreover, Verney continues, seems to be refuted by the persistence of the disease unmodified by avoidance of corn in the diet. No other intoxication is known which does not show a change for the better when the source of the intoxication is withdrawn. The existence of chronic, acute and fulminating cases of pellagra harmonizes better with the conception of an infection rather than an intoxication, even admitting that in certain cases the syndrome may be the result of superposed malaria, typhoid or meningitis. On the whole, he concludes, there is much to sustain the assumption that pellagra is an infection, and a protozoan infection in particular. The toxic and the infectious theories are not antagonistic but reenforce each other. The digestive disturbances induced by the spoiled corn favor intestinal derangement or there may be some toxic element. The resulting syndrome is not pellagra but the condition predisposes to pellagra, as also any other conditions entailing impoverished blood and lowered resisting powers. His conclusions are, therefore, that pellagra is an infection which develops independently when once it gets a hold in a debilitated organism.

114. **The Pneumococcus in the Conjunctival Secretion in Pneumonia.**—Crispolti found pneumococci in the conjunctival secretion in 40 out of 45 cases of pneumonia. They were numerous during the first five days but then became rarer and atypical forms predominated. In the 5 cases in which the conjunctival secretion contained no pneumococci, none was found in the sputum, and the pneumonia was probably due to some other germ, probably the influenza bacillus.

115. **Registration of Respiratory Movements by Injection of a Gas.**—La Franca reports experiments on dogs with air or various gases injected into the pleura, recording on a drum the respiratory movements afterward as they were modified by the pneumothorax.

118. **Constriction Hyperemia.**—Rabbits and guinea-pigs injected with virulent germs and then having constriction applied to the limb above seemed to die more quickly than the controls; even a sublethal dose became fatal under these conditions. On the other hand, recovery was promoted by the constriction hyperemia when the infection was with germs of comparatively slight virulence. Injection of typhoid and cholera germs, with the part shut off from the arterial circulation by the constricting band, induced a local production of antibodies having a destructive action on the germs. The induced hyperemia is not always accompanied by an accumulation of leucocytes in the part; they may even be less numerous than elsewhere. It seems to be evident that a number of factors combine to produce the beneficial results observed under suitable conditions with the induced hyperemia; no single element is responsible for them.

Hospitalstidende, Copenhagen

February 2, LIII, No. 5, pp. 137-168

119 Treatment of Venereal Buboes by Arning's Method. (Om Bubonbehandling.) O. Haslund.
120 Four Cases of Pulmonary Tuberculosis with Positive Bacterial Findings but Slight, Doubtful Physical Signs. (Tilfælde af Lungetuberkulose med positivt Bacilfund, men tvivlsomme stetoskopiske Forhold.) G. E. Permin.
121 Action of Digitalis and Strophanthus on the Frog Eye. (Digitalis- og Strofantusvirkningen hos Frøer.) P. Liebmann.

February 9, No. 6, pp. 169-200

122 Albumin and Tube Casts in Urine after Cold Bath in Health. (Om Albuminuri efter kolde Bade.) E. E. Faber.
123 Roentgen-Ray Examination of the Teeth. (Om Undersøgelse af Tænder ved Hjælp af Röntgenstraaler.) J. F. Fischer.

February 16, No. 7, pp. 201-224

124 Etiology and Pathogenesis of Serpiginous Corneal Ulcer. E. Jensen.

Nordiskt Medicinskt Arkiv, Stockholm

XLII, Surgical section, Nos. 1-2. Last indexed February 19, p. 663

125* Colloid Cystoma of the Ovary and the Colloid Degeneration of the Peritoneum after its Rupture, the So-Called Pseudomyxoma of the Peritoneum. (Ueber die Gallertkystome der Ovarien und die bei Ruptur derselben auftretenden gallertartigen Veränderungen des Bauchfells, s. g. Pseudomyxoma peritonei.) E. Ahlström.
126 *Mode of Action of Gastroenterostomy. (Wirkungsweise der Gastroenterostomie.) A. Pers.
127 *The Course and Outcome of Renal Tuberculosis in 33 Cases, in the Majority without Surgical Intervention. (Verlauf und Ausgang der Nierentuberkulose in einer Anzahl vorgeschrittener der Mehrzahl nach nicht operierter Fälle.) G. Ekehorn.

125. **Colloid Cystoma of the Ovary.**—Ahlström's article fills 276 pages and is accompanied by 7 plates and 8 tables of details regarding 81 cases from the literature, including 49 with microscopic findings. He also reports in detail 9 cases from his own experience with microscopic examination and 19 cases without this. The ovarian colloid cystoma is shown to be on the borderline between malignant and benign growths, and should no longer be regarded as inevitably benign. Proliferating epithelial metastasis, he asserts, is the principal feature of the process after perforation of the cystoma into the peritoneum. The proliferating epithelial cells of the colloid cystoma perforating the cyst-wall and invading the peritoneal cavity display a varying intensity of metastatic growth, but they seem to find an especially favorable medium in the omentum for almost malignant proliferation. In removing a primary colloid cystoma the colloid masses in the peritoneum should be wiped away, but it is not necessary to detach them with an instrument. The omentum should be resected wherever there are colloid deposits or changes in it. The frequent development of a cystoma in the other ovary, observed in nearly a third of the 32 cases in which the patients were traced for a number of years, suggests the importance of removing both ovaries. He was unable to discover any anatomic features as index of a specially energetic proliferating power on the part of the cyst epithelial cells; possibly the outcome may depend on the resisting power of the part of the peritoneum involved; the omentum seems to display much less resistance than other regions. Even in case of metastases, long survival may follow their excision. Implantation metastasis may occur even without naked-eye rupture. In about 27 per cent. both ovaries were affected, and in nearly 10 per cent. the second ovary became affected later. In about 20 per cent. the cystoma involved a ligament. Epithelial metastasis was evident in all of Ahlström's cases and in 57.1 per cent. of those on record. It was evident further that the colloid deposits exert a destructive action on connective tissue. One of his cases is, he believes, the first on record in which metastasis occurred in lymph glands outside of the abdominal cavity (above the diaphragm and in the groin).

126. **What Does a Gastroenterostomy Accomplish?**—Pers' previous communication on this subject was summarized in THE JOURNAL, Dec. 11, 1909, p. 2045.

127. **Course and Outcome of Renal Tuberculosis.**—Ekehorn has been studying the conditions and course of advanced tuberculosis in the kidneys in 33 cases with operative or autopsy findings in a number. Eight of the patients without operative treatment are still living, and 4 have entirely recovered so far as subjective symptoms are concerned; the urine is clear in one patient but there are signs of amyloid degeneration of the kidney in two cases notwithstanding the lack

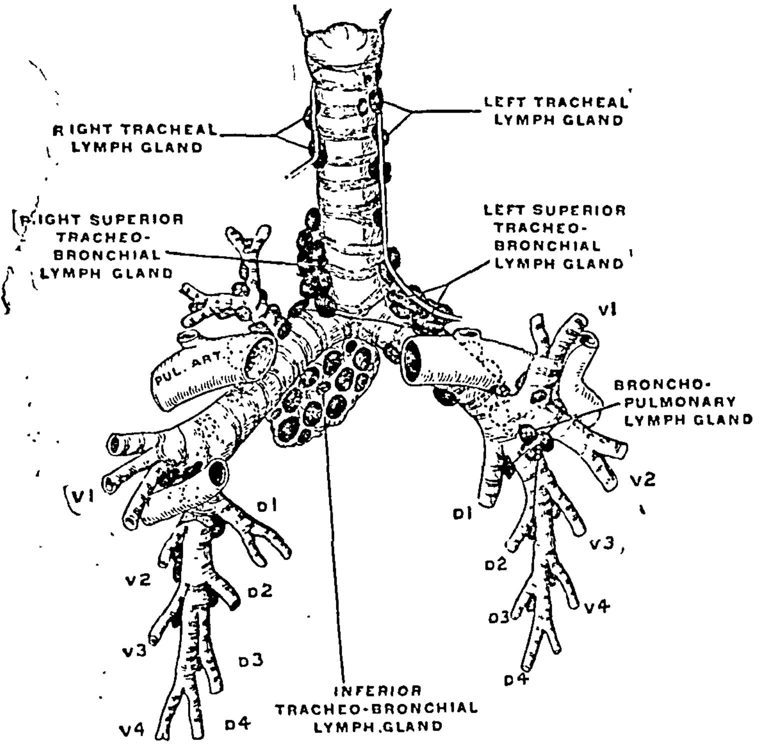
of subjective symptoms. All the patients who recovered were young, 5, 11, 19 and 19 years old respectively; the interval since averages 8 years. His material, he declares, confirms anew the importance of prompt nephrectomy as the only correct treatment. The relative improvement noticed in a number of cases after a time is deceptive. It means only that the tuberculosis in the kidney first attacked has reached the end of its active manifestations, the kidney then being largely or totally destroyed. But by this time there are usually manifestations of the disease elsewhere. Spontaneous arrest of the disease did occur in one of his cases after the kidney in question had become totally destroyed. The complete transformation of the kidney into a sterile sclerotic tissue with the flickering out of the last trace of vitality in the germs realized a kind of autonephrectomy after which the tuberculous lesions in the ureter and bladder below healed.

Ugeskrift for Læger, Copenhagen

February 24, LXXII, No. 8, pp. 199-234

128 *Dulness over the Right Apex of the Lung not due to Apical Lesions. (Om falsk Dæmpning over højre Lungespids.) H. I. Bing.

128. Dulness Over the Right Apex Not Due to Apical Lesions.—Bing calls attention to the dulness which increases as percussion is carried outward toward the side, and he presents evidence to prove that it is due to enlarged bronchial glands on the right side while the apex of the lung may be entirely normal. This is the dulness which Krönig found in mouth-breathers and which he ascribed to the adenoids and resulting disturbances. Bing shows that adenoids generally are accompanied by enlarged glands elsewhere, and especially in the bronchial chain, and that the real cause for the dulness is the peculiar arrangement of the bronchial glands on the right side where they are more numerous, higher up and occur in groups instead of being scattered isolated as in the left side. The dulness can be readily differentiated from that with tuberculous infiltration or retraction of the apex by its location, its distinctness under Goldscheider's, barely audible, "threshold" percussion and by the characteristic areas of dulness of different degrees in the front and back of the chest. He gives a number of illustrations of the areas involved and of the arrangement of the right bronchial glands, their preponderance, and the larger size and higher location of the bronchi on this side, his clinical experience confirming in every respect the arrangement of the tracheobronchial glands as depicted by Sukiennikow.


RIGHT TRACHEAL LYMPH GLAND
LEFT TRACHEAL LYMPH GLAND
RIGHT SUPERIOR TRACHEO-BRONCHIAL LYMPH GLAND
LEFT SUPERIOR TRACHEO-BRONCHIAL LYMPH GLAND
PUL. ART.
V1
BRONCHO-PULMONARY LYMPH GLAND
V1
D1
D1
V2
V3
D2
V2
D2
D3
V4
V3
D3
D4
INFERIOR TRACHEO-BRONCHIAL LYMPH GLAND
V4
D4

The tracheobronchial and bronchopulmonary lymphatic glands seen from in front. The pointed (?) lymphatic glands and lymph vessels are not visible from in front. d_1 d_2, first and second dorsal bronchial branches; v_1 v_2, first and second ventral bronchial branches. (Sukiennikow, from Gray's Anatomy, Ed. 17.)

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

Refraction and How to Refract. Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-Glasses, etc. By James Thorington, M.D., Professor of Diseases of Eye in Philadelphia Polyclinic and College for Graduates in Medicine (1896-1909). Fifth Edition. Cloth. Price, $1.50 net. Pp. 324, with 251 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

The Practice of Surgery. By Walter G. Spencer, M.S., Surgeon and Lecturer on Surgery, Westminster Hospital, and George E. Gask, F.R.C.S., Assistant Surgeon and Demonstrator of Practical Surgery, St. Bartholomew's Hospital. Cloth. Price, $5.50 net. Pp. 1,234, with 707 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

Remedial Gymnastics for Heart Affections used at Bad-Nauheim. By Dr. Med. J. Hofmann and Dr. Med. L. Pohlman. Translated by John G. Garson, M.D., Edinburgh, Physician to Sanatoria and Bad-Nauheim, Eversley, Hants. Cloth. Price, 5 shillings. Pp. 128, with 42 illustrations. London: Swan Sonnenschein & Co., 1909.

Die Bestätigung der künstlichen Züchtung des Krebserregers. Sowie weitere geschwulststatistische. Mitteilungen über Familien,- Ehegatten- und endemischen Krebs. Von Dr. Robert Behla, Regierungs-und Geheimer Medizinalrat. Paper. Price, 1.50 marks. Pp. 50. Berlin, S. W. 48: R. Schoetz, Wilhelmstr. 10, 1910.

Verhandlungen der Berliner medizinischen Gesellschaft aus dem Gesellschaftsjahre, 1909. (Separat-Abdruck aus der *Berliner klinischen Wochenschrift.*) Herausgegeben von dem Vorstande der Gesellschaft. Vol. XL. Paper. Pp. 497, with illustrations. Berlin: Druck von L. Schumacher, 1910.

Atlas zur mikroskopischen Diagnostik der Gynäkologie. Nebst einer Anleitung und erlauterndem Text. Von Priv.-Doz. Dr. Rudolf Jolly, Oberarzt der königl. Universitäts-Frauenklinik zu Berlin. Paper. Price, 17.50 marks. Pp. 83, with 54 illustrations. Berlin: Urban & Schwarzenberg, 1910.

Ionic Surgery in the Treatment of Cancer. With a Chapter on Ionization in Surgical Tuberculosis and in Hemorrhoids. By G. Betton Massey, M.D., Attending Surgeon to American Oncologic Hospital. Cloth. Price, $3. Pp. 239, with 80 illustrations. New York: A. L. Chatterton Co., 1910.

A System of Operative Surgery. By Various Authors. Edited by F. F. Burghard, M.S., Teacher of Operative Surgery in King's College, London. In Four Volumes. Vol. III. Cloth. Price, $10. Pp. 764, with 381 illustrations. New York: Oxford University Press, 1909.

The Rat and Its Relation to Public Health. By Various Authors. Prepared by Direction of the Surgeon-General, P. H. and M.-H. S. Paper. Pp. 254, with illustrations. Washington: [Superintendent of Documents] Government Printing Office, 1910.

Diseases of the Stomach and Intestines. By Robert C. Kemp, M.D., Professor of Gastro-intestinal Diseases in the New York School of Clinical Medicine. Cloth. Price, $6 net. Pp. 766, with 280 illustrations. Philadelphia: W. B. Saunders Co., 1910.

Modern Methods of Street-Cleaning. By George A. Soper, Ph.D., Member American Society of Civil Engineers. Cloth. Price, $3. Pp. 201, with illustrations. New York: The Engineering News Publishing Company, 1909.

Thirty-sixth Annual Report of the Secretary of the State Board of Health of the State of Michigan. For the Fiscal Year ending June 30, 1908. [F. W. Shumway, Secretary, Lansing, Mich.] Cloth. Pp. 222.

Dunkelfeldbeleuchtung und Ultramikroskopie in der Biologie und in der Medizin. Von N. Gaidukov. Paper. Price, 8 marks. Pp. 84, with 18 illustrations. Jena: Gustav Fischer, 1910.

Twentieth Annual Report of the Visiting Nurse Association of Chicago. Year ending Dec. 31, 1909. Office, Room 1408 Unity Building, 79 Dearborn St. Paper. Pp. 48.

An Analysis of Some Phases of American Mortality Statistics for Nine Years, 1900-1908. By Edward B. Phelps, M.A., Editor, the *American Underwriter,* of New York City. Paper. Pp. 14.

The Pocket Clinical Guide. By James Burnet, M.D., Fellow of the Royal Society of Medicine, Edinburgh. Cloth. Price, 1 shilling 6 pence. Pp. 127. Edinburgh: John Currie, 16 Teviot Place, 1910.

Twenty-fifth Annual Report of the Adirondack Cottage Sanitarium, Saranac Lake, N. Y. November, 1909. Paper. Pp. 24, with illustrations. [With Medical Supplement, pp. 16.]

Proceedings of the American Medico-Psychological Association. At the Sixty-fourth Annual Meeting held in Cincinnati, Ohio, May 12-15, 1908. [C. W. Pilgrim, Secretary, Poughkeepsie, N. Y.] Paper. Pp. 479, with illustrations.

Transactions of the Rhode Island Medical Society. Vol. VII. Part VI. [Stephen A. Welch, Secretary, 253 Washington St., Providence.] Paper. Pp. 883, with illustrations.

Twenty-third Annual Report of the State Board of Health of the State of Ohio for the Year ending Dec. 31, 1908. [C. O. Probst, Secretary, 1909.] Cloth. Pp. 352.

A History of the London Hospitals. By E. W. Morris. Cloth. Price, $1.75 net. Pp. 296, with illustrations. New York: Longmans, Green and Co., [1910].

Proceedings of the New York Pathological Society. December, 1909; January, 1910. Paper. Pp. 160. New York: K. M. Vogel.

The Law of the Generation of Sexes at Will. By Louis Dechmann, Seattle, Wash. Paper. Price, 10 cents. Pp. 12.

Annual Report of the Coroner of the County of Philadelphia, Pa. For the Year ending 1909. Paper. Pp. 22.

The Evolution of Religion. By William A. Hinckle, M.D., Peoria, Ill. Cloth. Price, 75 cents. Pp. 161.

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Original Articles

A LARGE CYSTIC TUMOR DEVELOPING FROM THE ILIOPSOAS BURSA

CONTAINING LARGE FREE CARTILAGINOUS MASSES, AND COMMUNICATING WITH THE HIP-JOINT

THOMAS S. CULLEN

BALTIMORE

History.—In November, 1908, I was asked by Dr. A. H. A. Mayer to examine a man aged 46 who had what appeared to be a very unusual pelvic tumor. About ten years before the patient had begun to limp, and a year later consulted a physician who told him that he had a tumor of the left hip. The condition gradually had become worse. For about a year the man had noticed that every time he put his weight on his left leg "something slipped" in his hip.

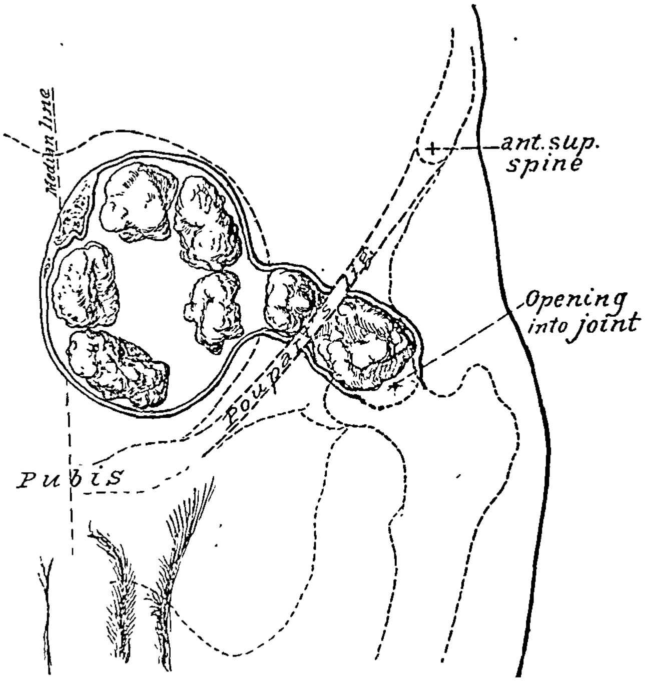

Fig. 1.—A cystic tumor developing from the left iliopsoas bursa containing large free cartilaginous masses and communicating with the hip-joint. Occupying the left half of the pelvis is a cystic tumor which on its outer side was firmly attached to the pelvic wall. The cyst walls were composed chiefly of fibrous tissue. The thickening in certain areas noted in the walls is due to deposits of bone. The cyst cavity was distended with clear yellowish, tenacious fluid and also contained five free and irregular cartilaginous masses. A narrow prolongation of the cyst passed downward and forward beneath Poupart's ligament and opened directly into the hip-joint. Filling this portion of the cyst was a large free cartilaginous mass. All the cartilaginous masses are shown in their natural size in Fig. 3.

Examination.—The patient was a tall, rather anemic looking man. The chest sounds were normal. The left leg was stiff and when walking he held the left hip-joint as immobile as possible. Occupying the left iliac fossa and extending beyond the median line was a firm oval mass, 8 by 10 cm. This was continuous with a smaller mass which passed below Poupart's ligament and extended to the left of the hip-joint anteriorly. The large mass seemed to fill the left half of the pelvis. In some places it appeared to consist of bone, but at other points felt cystic. It seemed to be intimately connected with the pelvic bone. The glands in both groins were palpable. The left leg was three-quarters of an inch shorter than the right. On flexion of the leg the pelvic mass receded somewhat, but on extension the tumor again became prominent. Flexion, extension, adduction and abduction were accompanied by dull crepitation in or near the hip-joint. On carefully questioning the patient it was learned that the swelling had been first noticed just below Poupart's ligament.

Operation.—An incision was made just above and parallel with Poupart's ligament and the extraperitoneal tumor exposed. After displacing the anterior crural nerve, which was markedly stretched over the tumor, and splitting the muscle which lay over it, it was found necessary to sever Poupart's ligament as a portion of the tumor lay beneath it. The pelvic portion of the mass was loosened up easily on its anterior and posterior aspects, but on the outer side was firmly attached to

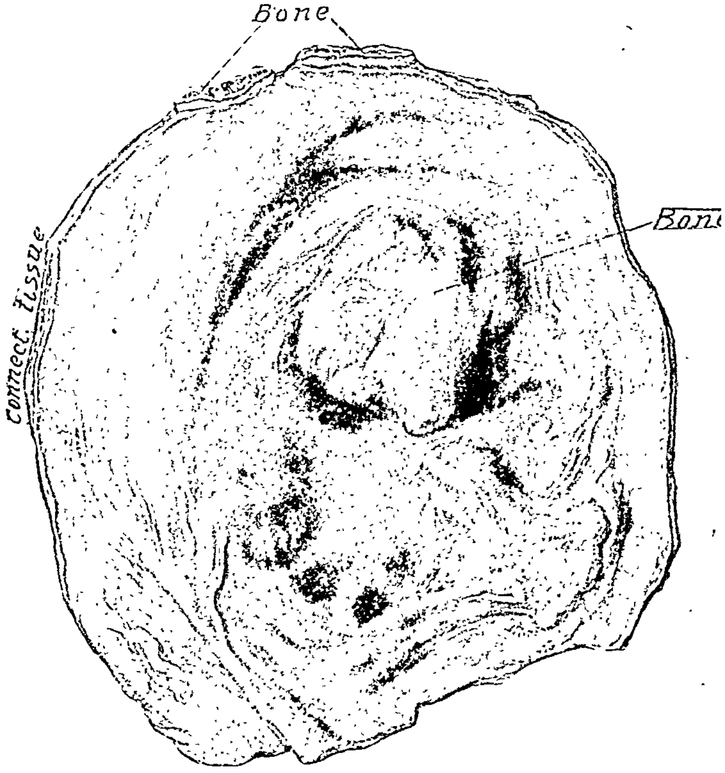

Fig. 2.—Part of the sac of a cystic tumor developing from the iliopsoas bursa. The picture represents the inner surface of the cyst. The walls vary from 1 to 2 mm. in thickness and in them are seen cross sections of plaques of bone. In other portions of the walls cartilage was noted. The inner surface presented a distinctly trabeculated appearance evidently due to the uneven stretching of the sac. Projecting into the cavity is an irregular bony mass fully 3 cm. in diameter. The sac was lined with a smooth glistening membrane; it contained clear yellow tenacious fluid and the six cartilaginous masses depicted in Fig. 3.

the ileum, and below seemed intimately related to the anterior portion of the hip-joint. After being walled off with gauze it was opened and there was an escape of clear viscid fluid, yellowish in color. Lying free in the cavity were five irregularly lobulated, hard cartilaginous masses (Figs. 1, 3). After these had been removed a sixth was found fastened down beneath Poupart's ligament. When this nodule had been taken out a finger carried downward and forward passed directly into the hip joint anterior to the head of the femur. The bones of the joint were perfectly smooth. The pelvic sac was gradually dissected free at a point considerably below Poupart's ligament. It was then cut away and the remaining portion which formed the margin of the entrance into the joint was trimmed, turned in on itself, and snugly brought together with catgut sutures, thus securely closing the hip-joint. A small drain was laid in the upper angle of the wound far removed from the joint and the incision closed.

Result. — For a few days the patient did remarkably well but then became delirious and talked incoherently. It was learned that on a previous occasion he had shown similar cerebral disturbances and that it had been necessary to confine him for a time in a sanitarium. Dr. Henry J. Berkley, who saw him in consultation, felt that his mental condition had nothing to do with the operation. The wound after draining for a few days closed completely and the patient left the hospital in excellent physical and mental condition five and a half weeks afterward. He was able to walk without much difficulty.

Subsequent History.—Dec. 6, 1909: Dr. Mayer informs me that the patient occasionally has some discomfort in his leg but no pain in hip-joint. He still uses a cane.

Description of Specimen.—The walls of the sac were composed of fibrous tissue and scattered throughout them were plaques of cartilage and definite bony masses (Figs. 1, 2). Some of these fragments of bone were very small; others reached 3 cm. or more in diameter. The inner surface of the sac presented a trabeculated appearance (Fig. 2) evidently due to the unequal and gradual distention of the cystic tumor. Notwithstanding the uneven appearance the inner surface was everywhere covered by a smooth membrane. The fluid contents were clear, yellowish in color and rather sticky. The six irregular, white, cartilaginous masses filling the cavity are shown in their natural size in Figure 3. They were lying perfectly free and five of them popped out as soon as the sac was opened. The sixth could not escape as it was firmly held down by Poupart's ligament and its lower end entered the hip-joint.[1]

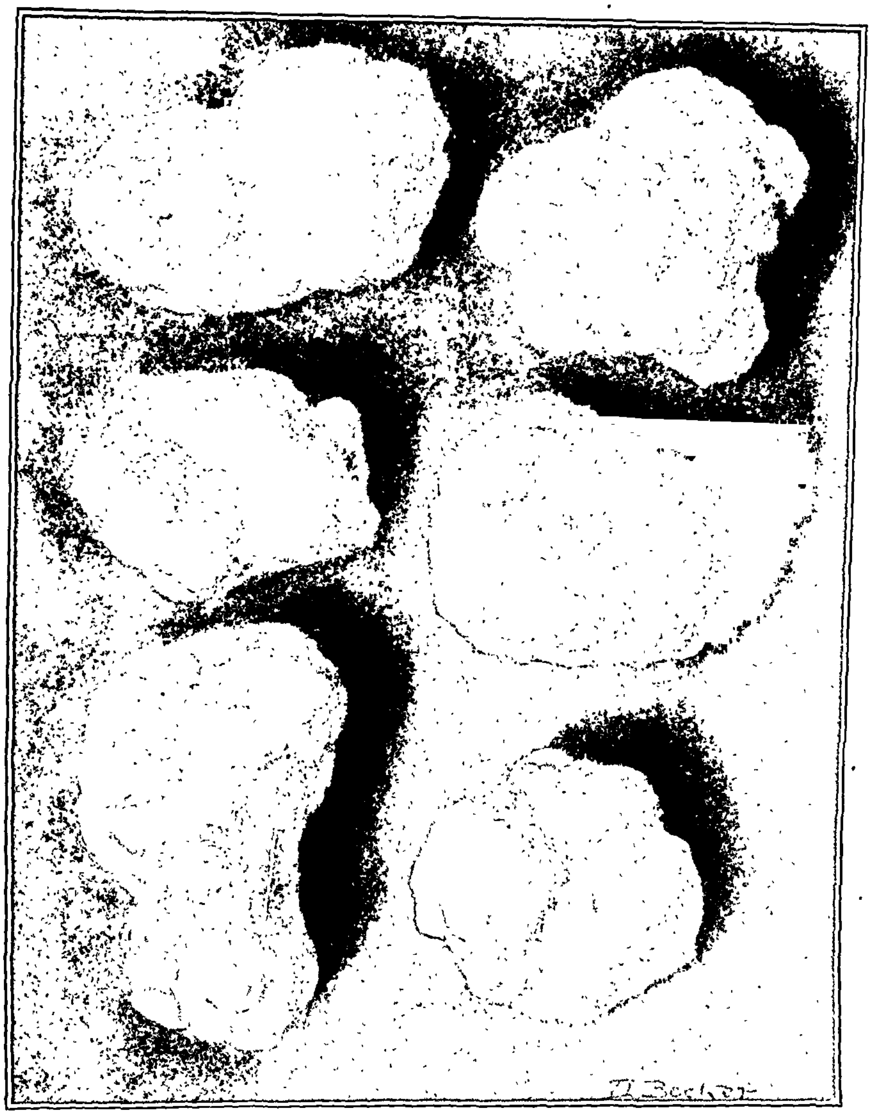

Fig. 3.—Cartilaginous masses lying free in a cystic tumor developing from the iliopsoas bursa (natural size). These masses were pearly white, very irregular, but perfectly smooth. They were rather lighter in weight than bone. Their general arrangement in the cyst is shown in Fig. 1.

ORIGIN OF THESE CYSTIC TUMORS

One of the largest, if not the largest, bursa in the body is that situated beneath the tendon of the iliopsoas muscle. This complex muscle arises from the body of the twelfth dorsal vertebra, from the bodies of all the lumbar vertebræ, from the transverse processes of all the lumbar vertebræ and from the iliac fossa. The combined tendon is inserted in the trochanter minor. In order to reach this the iliopsoas muscle must curve around the crest of the ilium. It is beneath the muscle where it curves over the bone that the bursa is found. It lies beneath Poupart's ligament below and lateral to the iliopectineal eminence. According to some authors it may attain the size of a hen's egg.

According to Joessel[2] the iliopsoas bursa or the bursa mucosa subiliaca lies between the partly tendinous portion of the iliac muscle and the front of the iliopectineal eminence. Anteriorly, it is firmly attached to the iliopsoas muscle, posteriorly to the iliopectineal eminence, and likewise to the thin portion of the capsule of the hip-joint.[3] It is bounded on the outer side by the iliofemoral ligament, below by the pubofemoral ligament and on the inner side by the cotyloid ligament.

Joessel further finds that occasionally the fibrous capsule at the thin point of the joint is wanting and then nothing but the synovial membrane separates the joint from the bursa. Occasionally the synovial membrane is lacking at the thin point and in these cases there is a direct communication between the hip-joint and the bursa. This opening explains how purulent accumulations of the joint may extend to the iliopsoas bursa and then appear under the iliopsoas muscle and also how psoas abscesses may travel down the muscle and eventually cause involvement of the hip-joint. An extended consideration of the subject would necessitate a discussion of practically all diseases of the hip and would naturally lead us too far afield. I shall consequently limit my remarks chiefly to those cases in which cystic tumors similar to this have been noted and in which little or no evidence of inflammation has existed.

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[1] The specimens were demonstrated to the class and then drawn. During my absence in Europe they were unfortunately mislaid and have not yet been located; consequently I have thus far been unable to make a careful histologic examination to determine definitely whether the central portion of the cartilaginous masses contained bone or not.

[2] Topographisch-Chirurgische Anatomie, i, 169.

[3] This thin spot is well seen in Figure 232 of Cunningham's Anatomy, 1909, p. 296.

When consulting the literature I found a most instructive and painstaking article on "Diseases of the Bursæ of the Hip" by R. Zuelzer.[4] I have examined in the original the references given by this author and have found them in the main so well epitomized that I shall draw largely on his descriptions and conclusions.

It has been noted that the bursæ that are regularly found are usually developed during fetal life, while the less constant ones appear at a later date. Virchow and Schuchardt found that the small subcutaneous bursæ developed out of a connective-tissue network resembling cavernous tissue. Eventually a cavity was formed in which as a result of the continuous movements and rubbing the connective tissue gradually atrophied. The walls of these bursæ consist of dense connective tissue and contain a very little elastic tissue. The inner surface is lined with one layer of so-called endothelium and the contents of the bursa resemble those of the joint. They are slightly tenacious, thick and usually just enough in amount to keep the walls of the sac smooth.[5]

CASES OF CYSTIC DEVELOPMENT OF THE ILIOPSOAS BURSA AS COLLECTED BY ZUELZER

Hoffa: The patient, a workman, was struck on the right foot and the left arm. He walked home at once a distance of about two miles, remained without treatment for fourteen days and again went to work. A year later he complained of pain in the region of the right hip. On examination the leg was found slightly flexed, abducted and rotated outward. At the hip was a painful tumor which was clearly visible and palpable; it lay under Poupart's ligament between the psoas and the pectineus muscles and was of the consistence of bone. On flexion of the leg, however, fluctuation could be detected. The trochanter was in its normal position and movements of the hip-joint were easily made. Adduction, flexion and rotation inward were, however, somewhat limited. The pain extended down to the knee. The corresponding leg was somewhat thinner than the other. This case was diagnosed by a colleague as an impacted fracture of the neck of the femur and the tumor was thought to be a callus formation pressing on the crural nerve and causing pain. There was no shortening of the leg.

Ehrle: A cooper, aged 33, for thirteen years had suffered with pain in the leg and down its inner side. Four months before coming under observation he noticed a tumor situated slightly below Poupart's ligament. This was ovoid in shape and lay under the large vessels. On extension of the leg the tumor became hard. On flexion fluid could be detected. Extension and rotation outward produced pain. By flexion it was clearly seen that the psoas muscle was lifted up. The hip-joint was free.

Herdtmann: The patient had been squeezed between two cars, the chief pressure coming on the left hip. The patient was carefully watched as he was supposed to be a malingerer. On examination, however, a painful swelling of the bursa beneath the tendon of the iliopsoas muscle was found. Flexion of the leg or rotation inward caused much pain in the joint.

Mommsen: This surgeon saw a patient who had an elevated, clearly fluctuating painless tumor which projected from the region of the iliopsoas muscle and passed out beneath Poupart's ligament. It lifted up the femoral artery. On pressure the tumor diminished in size.

Mommsen: The same author reported a case of a man 50 years old who without apparent trauma complained of difficulty in walking on account of a gradually increasing swelling in the right inguinal region. The tumor was as large as two fists and was situated deep in the right iliac fossa. It was firm in consistency and only slightly movable. It was thought to be a sarcoma of the fascia of the hip. At operation its lower pole was found firmly attached to the joint capsule. The cyst walls varied from 3 to 5 mm. in thickness and the failure to detect fluctuation was due to over-distention of the cyst.

Schäfer: The patient, a man coming to Volkmann's clinic, complained of a tumor the size of a child's head situated at the flexion of the thigh and lying under Poupart's ligament. The man had fallen and injured his hip a year and a half before. The tumor projected only slightly above the normal skin surface. It was buried deeply in the muscle of the thigh, was elongate oval and followed the long axis of the psoas muscle. The thigh was markedly flexed. When the leg was extended the tissue was of stony hardness. With extensive flexion some fluctuation could be detected. A second tumor the size of an apple was present at the edge of the gluteus maximus. This tumor also on extension was tense, but on flexion of the hip it became softer. Its contents could be made to disappear and as a result the anterior tumor became more distended. The cystic tumors communicated with one another. The movement of the hip joint was free. The pain radiated from the hip to the knee.

Fricke: This author described a case of a carter who without apparent cause had a tumor in the hip region. It lay over the right trochanter and passed inward under Poupart's ligament and extended downward over the upper third of the thigh. It really formed three tumors. The outer portion was as large as a child's head and markedly distended. The second lay on the inner side of the thigh and the third, the smallest, lay between them. All three fluctuated and the fluid could be pressed from one tumor into the other. The position of the thigh was normal but movement of the hip was impossible on account of the severe pain which was caused especially by flexion and rotation. The tumor itself was not painful on pressure but pain was reflected down to the knee.

Heineke: This author observed a case in the Greifswald clinic in which after a rheumatic inflammation of the hip-joint a prominent and distinctly fluctuating tumor developed. This followed the direction of the iliopsoas muscle from Poupart's ligament downward and raised up the femoral artery. On pressure the tumor diminished but on removal of the pressure the tumor again became prominent. Passive motion of the hip-joint was free and painless. In this case there was accumulation of fluid in the iliac bursa and this communicated with the hip-joint which also contained an excess of fluid.

Wood[6] reported a case in a thin man 28 years old, who two years previously, while convalescing from typhoid fever, had sprained his left hip. Walking was associated with severe pain. Six weeks later he noticed a swelling in this region. There was swelling both in front of and behind the hip and fluctuation was definite. A diagnosis of gluteal abscess was made. The patient, on account of well-marked contraction of the iliopsoas muscle, was unable to extend the leg. The tumor ruptured and there was a spontaneous expulsion of particles of bone as large as beans. The hip-joint was freely movable and not painful. This is one of the very few cases in which the bursa contained foreign bodies.

Couteaud: This patient was a man, aged 31, who was very strong and had done heavy work. Six years previously he had had syphilis. In the left inguinal region and on the inner side of the thigh was a prominent tumor the size of an egg. This was smooth, rounded, painless and could not be made to disappear. The skin over it was freely movable. On examination fluid could be detected in the pelvis and this fluctuation communicated with the tumor. The hip joint was normal. The tumor was punctured and clear citron yellow slightly tenaciou fluid came away. In this case the chief pain was in the regio of the knee.

Since Zuelzer's paper several cases have been recorded. Th most interesting one is that of **Delbet**.[7] This surgeon give very short account of a case in which he diagnosed a cyst tumor of the iliopsoas bursa (a hygroma) before operatio On opening the sac he found three foreign bodies each of whi was the size of a large nut.

DIAGNOSIS

In summing up his article Zuelzer points out that the tumors may be of various sizes and that the swelli

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[4] Deutsch. Ztschr. f. Chir., 1899, L, 148.

[5] Those interested in the should not fail to read the excellent paper c of Verneuil by Dr. John W. Churchman, Res Johns Hopkins Hospital (The Am. Jour. of th , 1909).

[6] This is the only case of Zuelzer's that I could not conf as the reference is incorrect and consequently I have not been to obtain Wood's original article. I was unable to trace the either in the *Index Medicus* or the Index Catalogue of the Surg *General's Library*.

[7] Corps étranger contenu dans un hygroma de la bours psoas, Bull. et. mém. Soc. de chir. de *Paris*, 1902, xxviii, 1

This is probably, however, only a part of the reason for the recurrence of this ulcer. In looking for an explanation of the reappearance of ulcer after so long a time, and for that matter, the explanation of the occurrence of all ulcers, either gastric or duodenal, we cannot forget the very plausible theory of hyperacidity. This theory has been given new standing by a very illuminating article by Paterson,[2] who, indeed, refers to other possible causes of ulcer, but gives hyperacidity the chief rôle. He has very little to say regarding the part that the infections play in the production of ulcer of the stomach, duodenum and jejunum other than that produced by the "toxic" action of hydrochloric acid.

In 1904, at the Milwaukee meeting of the Western Surgical and Gynecological Association, it was my privilege to discuss the relationship of the infections of the gall-bladder to the infections of the stomach and duodenum as expressed in ulcer of either or both of these structures.[3] In that paper, viewed in the light of present knowledge, my present views based on later experiences, were not well expressed; but the practical significance of the observations of that time have not been changed as to the rôle that gall-bladder infections play in the production, not only of the ulcers under consideration in this paper, but of chronic infections of the liver and pancreas as well. A large majority of the cases of gastric and allied ulcers have a history of chronic cholecystitis, and I believe that the recurrence of these ulcers, after a well-performed gastro-enterostomy, is due to the persistence of the chronic infection in the gall-bladder which has not been disturbed or corrected by the anastomosis procedure. If hyperacidity is the cause of the greater number of ulcers, as asserted by Paterson in his excellent article, why is it that only 33 per cent. in a total of 56 of his patients ad a "diminution" of their hyperacidity? Paterson rther maintains that, as a necessary preventive of peracidity following gastro-enterostomy, the anastotic opening should be ample. Failure to make the ening large will account, according to him, for the urrence of the excess of gastric acidity. It is assumed t in the 56 operative cases reported as performed by self, this necessary detail in technic was not overed; yet only one-third of his reported cases showed, ar as followed, a lessened hyperacidity.

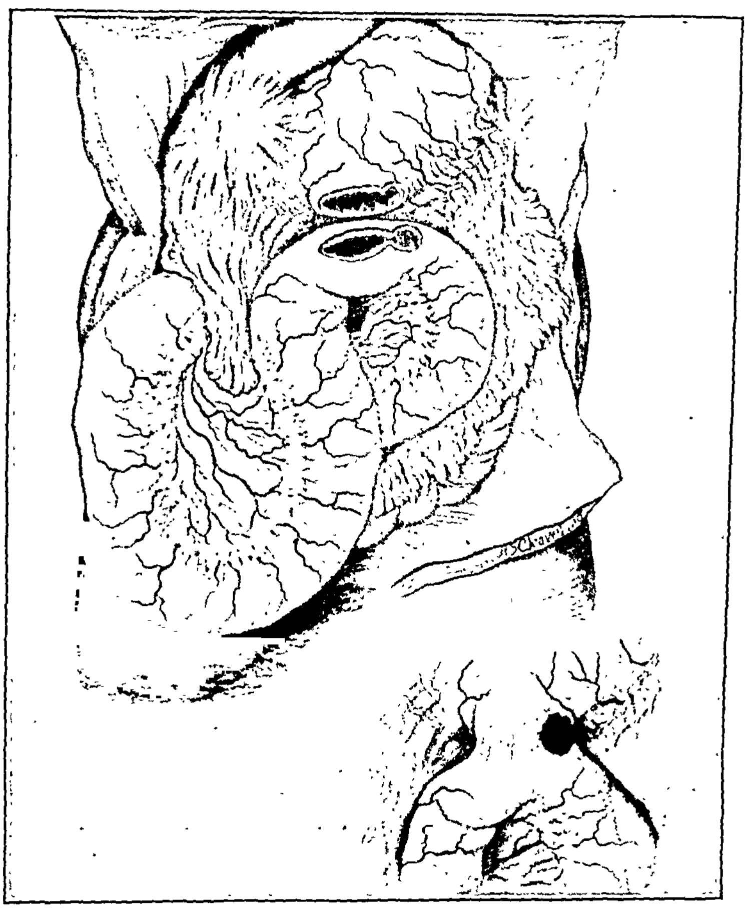

Fig. 2.—Lower right-hand corner, perforating ulcer at site of anterior gastrojejunostomy; above, appearance of former anastomosis on separating jujenum from stomach, also, at right-hand end of dissected anastomosis, perforating ulcer involving both stomach and jejunum.

s the usual picture painted by the symptom-complex astric ulcer and allied conditions in other structures his region not due to another cause than gastric hyperacidity? What were the findings in the case reported here when the abdomen was opened? Adhesions, stasis and infection. Is it strange that an ulcer should appear in close proximity to a reservoir the fluid contents of which have been shown repeatedly to contain not only an abundance of the colon and typhoid bacillus, but also many other forms, as streptococcus and staphylococcus?

The source of the infection of the gall-bladder need not concern us now. But we do need to remember that the typical and characteristic thing about practically every cholecystitis is its chronicity. Acute cholecystitis is a rare condition except when produced by the traumatism of gall-stones. The vast majority of the cases of cholecystitis are chronic because the bile seems to have the power of limiting the virulence of the poisonous organisms which are contained in it. But when this inhibiting influence is lessened, it is often expressed in the form of ulcer of the stomach or duodenum or jejunum. I believe this to be the rational explanation in every case of ulcer in this region of the abdomen, viz., a previous and long-existent cholecystitis. Hyperacidity may play a late part in these infections, but it is not the leading one. Hyperacidity is a common condition without obstruction, dilatation or prolapse. Hyperacidity, when long continued, produces a thickened and tough gastric mucous membrane; in other words, builds a wall against itself. Hyperacidity has no analogue in any other part of the body. Destructive hyperacidity is a chemical dream; while bacteria—some of which do, and others do not develop in the bile—form a focus of infection in the gall-bladder that has back of it all the possibilities spelled by the word infection.

The case which forms the basis for this paper has a known history of cholecystitis for twelve years. The anterior gastro-enterostomy improved the patient's nutrition for eight years to the degree at which it was possible for him to overcome the ill effects of his infection. But the anterior gastro-enterostomy in 1900 did nothing to relieve the chronic gall-bladder infection. The gall-bladder was left buried in adhesions. Because of this peristalsis was inhibited in all these structures, stasis of infected bile was perpetuated, and the chronic infection remained as a future menace to the stomach and the first portion of the small intestine. This menace of infection again became a certainty when it expressed itself finally by a hemorrhage in March of last year.

As I pointed out in my previous paper,[3] chronic cholecystitis may also be the "cause of cirrhosis of the liver in an individual otherwise free from the usual history

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Paterson: Ann. Surg., August, 1909.

Percy, J. F.: The Practical Significance of Certain Common oms in the Upper Abdomen, THE JOURNAL A. M. A., 1905, 3.

that precedes the average case of this disease, viz., chronic alcoholism," and I gave the history of three cases which bear out my statements. These are the cases of cholecystitis in which the liver and pancreas bear the brunt of the infection, and not the stomach or small intestine. To quote again from that paper:

> As long as we have ulcer in the stomach or duodenum, or an infected gall-bladder, to furnish a long-continued infection through the lymphatics to the liver and pancreas, we are sure to have occasionally a patient who will die following operative procedures in the upper abdomen, regardless of the skill with which such operative procedures are conceived, or by whom carried out.

Is it necessary for me to add that infections of the liver and pancreas due to a chronic cholecystitis furnish a larger mortality, with or without operation, than do the infections in this region which result in ulcer?

In closing, permit me to urge that every gastro-enterostomy for ulcer, or its sequelæ, have combined with it drainage of the gall-bladder, unless the operator fears that the additional traumatism may add too much of additional danger to the outcome for the patient. This was true in the case which I have reported above. At the present time, ten months following the operation, the patient is in perfect condition in every way. Not only is this true as to normal gastric acidity, but weight, hemoglobin and strength are also normal. But the patient still has his chronic cholecystitis.

The cases of ulcer herein referred to in which cholecystitis is not present are so few in number that they may almost be ignored. I believe that cholecystotomy is practically always indicated because their successful and permanent cure can only thus be secured.

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A METHOD OF TREATING MANDIBULAR FRACTURES *

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Modern surgical science teaches that the essential requirements for successful treatment of mandibular fractures are readjustment of fragments, restoration of normal dento-articular plane, fixation, immobilization, rest, nourishment and aseptic hygiene.

Of these cardinal factors there is little doubt but that fixation and immobilization have always proved the greatest problems. Surgical history is replete with various and many methods for the accomplishment of these ends, and a review of the literature on this subject shows that during the past half century, or since the Civil War, there have been two general schemes in vogue, each with numerous modifications, namely, the application of external support through medium of mento-mandibular splints, with occipitomental counter-pressure and the application of internal support through adaptation of interdental splints, with occipitomental counter-pressure.

Generally speaking, the medical profession has advocated the first, and the dental profession, from which it emanated, has championed the second method.

In addition to these, there has been frequent recourse to processes of wiring and in recent years to a natural development of these processes, the adjustable fracture bands and traction-bars.

So many well-founded objections have been raised against the use of external splints, mainly on account of their general inefficiency in maintaining adjustment of contour and articular plane, that the method has become practically obsolete. The introduction of interdental splints marks an epoch in the history of maxillary fractures of which dentistry may well be proud. It gave at once such assurances of holding the adjustment and maintaining the articular plane, thus restoring normal function and preventing deformity, that it rapidly sprang into prominence and custom. But the indiscriminate use of these appliances without due consideration of the individual requirements of each case, or of the kind, style or application to the cases presenting, combined with such objections as uncleanliness, strain and soreness of muscles from jaws being kept open, the length of time required before appliance could be constructed and the discomfort to the patient in securing proper impressions, have produced a marked decrease in their popularity.

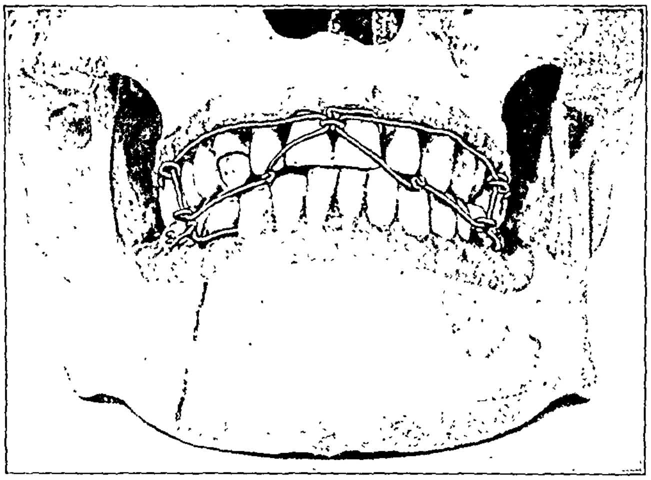

Fig. 1.—Front view, showing detail of wiring by anchor loop and traction wire method.

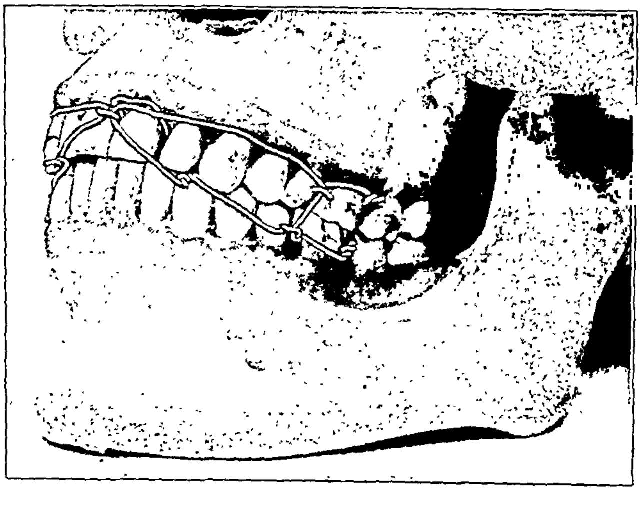

Fig. 2.—Left lateral view of same subject.

The objections to the usual methods of wiring have been due to faulty modes of application and to the kind, size and strength of wire employed. In a great majority of cases the ordinary silver suture wire, 26 to 30 gauge, has been used. This always stretches under stress, becomes loosened from around the teeth, releasing the traction necessary to fixation and is often forced into

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* Read in the Section on Stomatology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

the soft tissues, producing distress to the patient and the usual consequences of irritation and inflammation.

The adjustable fracture band and traction-bar method has proved very efficient. Its disadvantages accrue from the numerous appliances required, which tend to hinder its general applicability.

Being firmly convinced that a process of wiring presented the simplest, easiest, quickest and surest method of treating these cases, I began a series of experiments some years ago, with a view to the improvement of its technic and the development of a standard method whereby rigid fixation and absolute freedom from mobility could be obtained. It was recognized early that much heavier wire, less ductile than silver, would be necessary, that the old figure-of-eight plaiting of wire across the line of fracture must be discontinued, and that some plan to prevent lateral mobility of jaws must be devised.

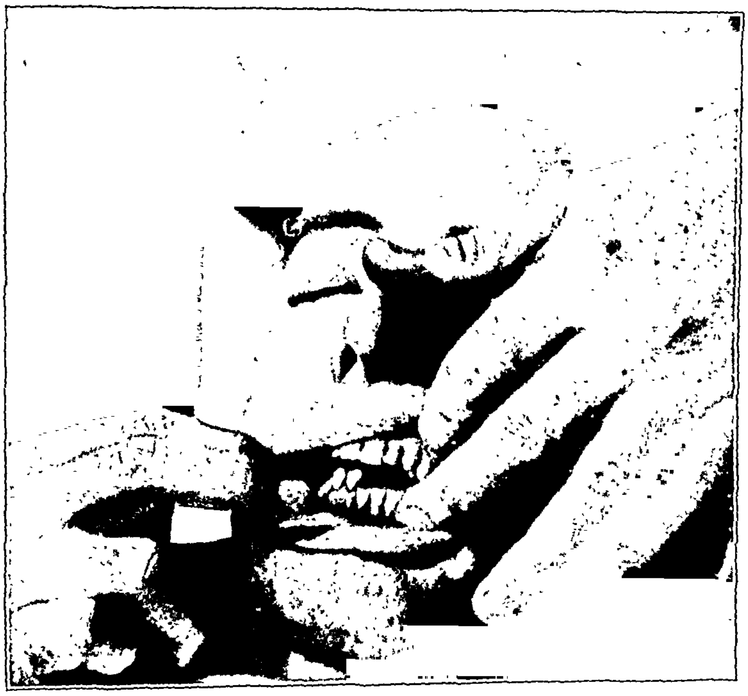

Fig. 3.—Cadet ———, U. S. M. A. Compound fracture, transverse through socket of right lateral. Showing deformity one hour after occurrence.

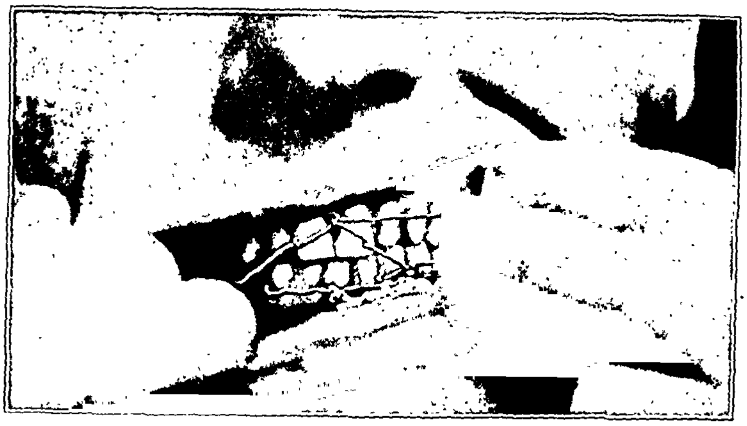

Fig. 4.—Same patient, front view, with jaw wired.

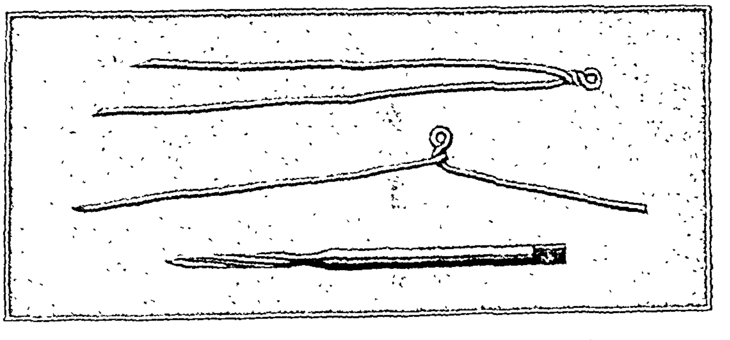

Fig. 5.—Median and lateral anchor loops and Peeso's reamer.

With these objects in view, various schemes were tried, with varying success, until the following method was adopted in 1903. Since then it has been used exclusively, with such splendid success that not one case of failure to unite, deformity, deflected articular plane or impaired function has resulted. For purpose of illustrating the method let us suppose a case with simple fracture, slightly transverse through socket (distally) of right first bicuspid and mental foramen, slight deformity, articular plane deranged, long anterior fragment drooping somewhat and short posterior fragment drawn slightly upward and inward—the typical picture. The mouth is first thoroughly cleansed with hot antiseptic wash and swabs, the location and extent of fracture determined and the fragments adjusted and articular plane restored. Then a piece of soft drawn copper wire, about 4 inches long, previously annealed and sharpened at each end, is inserted from without inward between the right lateral and cuspid, is pulled through about half its length, burnished lingually to cuspid and then inserted from within outward between cuspid and first bicuspid, pulled through buccally again, where it is held. The other end is now brought back and inserted at the latter interproximal space, pulled through taut, burnished lingually to first and second bicuspid, carried back across line of fracture, inserted from within outward between first molar and second bicuspid, pulled through buccally again, brought forward taut across line of fracture and twisted with remaining end at a point opposite an interproximal space. The adjustment of contour and articular plane is now verified; after which the ends are tightly twisted, bringing firm traction through axis of each fragment across line of fracture which temporarily will hold the parts in their exact position. The twisted ends are clipped off, leaving a stub about an eighth of an inch long; this stub is turned upward and inward, entering the interproximal space far enough to prevent it from injuring any soft tissues with which it may come in contact. Immobilization is next accomplished by wiring lower to upper teeth, while occupying normal occlusion. This is done by the following original method, which insures against the possibility of *any* mobility, either lateral or perpendicular: First, an anchor loop is made by taking a six-inch piece of annealed soft-drawn copper wire, 20 gauge (B. & S.), bending it in the middle around a small-sized mandrel about one-thirty-second of an inch in diameter, and twisting tight by one full turn with flat-nose pliers (the twist may be strengthened by "tacking" together with a small bit of hard solder). The two long ends are now straightened out and placed parallel to one another, one end being snipped off one-fourth of an inch shorter and both ends pointed. They are now inserted from without inward, between the two superior central incisors, pulled through taut until loop rests, horizontally, firm against both teeth at the mesocervical border. Each end is now carried laterally from median line, burnished, respectively, to lingual surface of each central, and inserted from within outward between its respective central and lateral, pulled through firmly, brought forward to median line, above loop, and twisted tightly together, clipping off and turning stub into interproximal space as before noted. This forms a solid, permanently fixed, median anchor loop from which counter-traction may be had from each lateral half of mandible for support and the prevention of lateral mobility. Four pieces of the same wire, about 3 inches long, are in turn bent around the mandrel as before cited, forming the loop about one-third distance from one end, and the long end sharpened. These lateral anchor loops are placed around solid teeth, one on each side, usually first molars or second bicuspids, in both upper and lower jaws, and serve as anchorages for the traction wires, one for each side. These traction wires, threaded through all the loops commencing with median, then superior lateral, then inferior lateral and finally twisted with outer end midway between inferior lateral and median loop, exert a firm and constant pressure between upper and lower jaws and at the same time maintain counter-traction laterally. The twist is clipped short and may be turned upward under upper teeth. The lateral loops are positioned by inserting long ends into mesoproximal spaces of the respective teeth selected, pulled through taut until loop rests horizontally against cervicoproximal border, then carried backward, burnished to lingual surface, inserted from within outward at distoproximal space, pulled through firmly and twisted to outer end as near the latter proximal space as possible in order that the increased size of twist, being too large to pull back through space, will prevent the anchorage loop turning under stress of subsequent traction and also that the twist may be clipped off and turned into the space as above shown. The traction wires are about 7 inches long, of same material, and should be annealed before being used. Care should be exercised to keep each one perfectly straight between loops and pulled taut in passing through each loop. When properly placed there will be produced a triangular geometrical figure with its first "stretch" a long horizontal line from median to superior lateral loop, a short perpendicular line from superior to inferior lateral loop and a long slanting diagonal line from inferior lateral to median loop, in which the twist has been made. With these heavy traction wires firmly fastened from each side of jaw with teeth in normal contact, there is little likelihood of any kind of motion between either the fragments or the jaws. Thus we have absolute fixation and immobilization exemplified in one operation of two stages.

It usually becomes necessary to tighten the wires after the second day. This is readily accomplished by simply turning an angle with narrow-beaked flat-nose pliers in each long stretch of each traction wire, thus taking up the slack which may be caused by loosened lateral anchorages, from inflammatory processes or by the stress of traction on the respective teeth. This tightening can be done every few days, as required, until the angle thus formed may be turned so far as to produce the letter Z. It seldom reaches this point, however, if care is exercised in keeping wires straight between loops and taut at each, when they are first applied.

Should a wire break or become ineffective from being stretched, a very firm occipitomental bandage is applied and both traction wires cut and removed. The anchorage loops are now tightened and new traction wires applied as before.

In cases in which the teeth are irregular or crowded too close together to permit the insertion of wires between them, an opening is made through soft tissues and alveolar process about one-eighth of an inch below its superior border and between the roots of teeth. This is done by quickly forcing a rapidly revolving Peeso reamer through at the point desired, and is usually accompanied by very little pain and slight hemorrhage. The subsequent tight pressure of wires on these soft tissues requires no other attention than the maintenance of cleanliness, as the position of wire is accommodated and the pain is negligible. In severe cases, in which a general anesthetic is required, the whole operation above outlined should be completed except the insertion of traction wires. These should not be introduced until the next day, after the fear of nausea or vomiting has passed. Even then it is well to leave a small pair of wire-cutting shears with the attendant, with instructions how and when to use them should such interference be necessary.

With this means of securing durable fixation and thorough immobilization, the physiologic function of reuniting takes place readily and rapidly.

The patient is fed on liquid diet, consisting of broth, thin gruel, milk, custards, etc., every two hours, with egg-nog three times a day, taking it through a rubber tube which may enter the mouth either through an existing vacuity or by being forced back through the post-dental space.

The patient rarely experiences pain after forty-eight hours, and if the usual instructions in regard to rest, nourishment and oral hygiene are followed the wires may be removed during the latter part of the third week, a firm occipitomental bandage being substituted for them for several days following. In removing the appliances, the traction wires are first cut and slipped out, leaving all anchorage loops *in situ* for subsequent use should it become necessary, for any reason, to fasten up the jaws again. When everything is finally removed the teeth, mouth, tongue and gums should be thoroughly cleansed and the patient instructed in the discriminate use of the jaw for a period of several weeks.

With some nervous patients having a hysterical tendency, it is good practice to supplement this wiring process by adjusting one of the many forms of occipitomental bandages—this as much for the psychic effect on the patient as for any mechanical assistance rendered.

Hot antiseptic mouth-washes should be used five or six times daily and all the loops, wires, teeth, gums and mucous surfaces thoroughly swabbed with a 50 per cent. solution of hydrogen dioxid at least once a day, followed by the hot antiseptic solution.

ABSTRACT OF DISCUSSION

Dr. M. I. Schamberg, New York: In treatment of fractures of the jaw, we are not always able to employ anything which depends on the occlusion of the teeth, because in some cases the teeth are absent, but when there are a sufficient number of teeth to use one jaw to splint the other, I think it is the ideal method of treatment. I do not altogether agree with Dr. Oliver that so elaborate a method of wiring is essential, as I have achieved good results from the use of very simple methods. That is, taking ordinary brass wire, passing it between the teeth, and bringing it up taut as for the retention of a rubber dam. I do this in several parts of the mouth, thus supporting the lower jaw. I frequently find it necessary to run these wires in various directions to maintain proper traction. In dealing with these fractures, owing to the fact that many of them reach us after the patient has gone through other hands and reduction has not been complete or has not been maintained, I have found it necessary to pass the wire through the inter-dental space between the bicuspid of one side and create traction forward by means of this by an assistant while the jaws are brought into position. I believe that the method outlined by Dr. Oliver is a valuable one, particularly because it gives the part absolute physiologic rest. It seems to me unreasonable to expect good results with the use of splints which permit the patient to masticate during repair. A patient can live for many weeks on liquid nourishment.

Dr. J. E. Power, Providence, R. I.: I agree with Dr. Schamberg that the more simpler methods of using wire have given excellent results. I cannot, however, agree with either Dr. Schamberg or Dr. Oliver in the recommendation of any appliance that will cause absolute fixation of the upper and lower jaws. I believe that it is unfair to incapacitate the patient if the fracture can be treated in any other way. Dr. Oliver describes in his paper the method which I have used in what is known as "first aid to the injured"—not, however, with the exacting technic or elaboration which he has demonstrated here. In fractures such as Dr. Oliver has described I first get an impression of both the upper and lower jaws, then I make plaster models, sawing the model through the lines corresponding to the lines of fracture. I then reconstruct the model, first getting normal occlusion, with the opposite jaw. A die and counter die are then made and a metallic splint is swagged (preferably of aluminum) to fit over the teeth on the reconstructed model. The time consumed is not much more than one hour, and the operator may have the prosthetic assistant attend to the making of the splint. If the model has been properly reconstructed according to recognized anatomic lines, the splint can be easily adjusted. Its advantage is that the appliance does not incapacitate the individual in any way, and it does not interfere with the natural method of feeding. Three or four hours after the splint is adjusted the patient can go on with his regular work, without any inconvenience. Dr. Schamberg places great stress on physiologic rest.* If the cardinal principle of surgery is rest, then we bring it about in the case of fracture, by fixation. If there is a fracture through the bicuspid region such as the one described by Dr. Oliver, and the fragments are brought together and held in position by a metallic splint, the parts are given physiologic rest. Physiologic rest does not mean absolute rest of the whole oral cavity and its appendages, if only one of the bones is fractured. This is demonstrated in the general practice of surgery. If a fractured limb is subjected to absolute rest for a long period, there will be muscular atrophy; this is guarded against by the general surgeon through the medium of massage of the parts involved. If this great law of use and disuse applies to a limb, it is reasonable to believe that other parts of the body will be likewise affected. I claim, therefore, that it is an advantage to overcome this tendency to muscular atrophy, by allowing the patient to use his jaws and by holding the fragments in position with the splint which I have described, whereby the proper amount of physiologic rest is applied to the proper area. I think that absolute rest of the jaw which is not affected, as well as of the affected one in uniting them by any method which will impair their normal action is a disadvantage both to the process of repair and to the comfort of the patient.

Dr. George V. I. Brown, Milwaukee: There are many conditions under which we have to care for fracture of the jaw; therefore, we need many appliances and different forms of treatment. Dr. Oliver offers his method as one kind of treatment and would, no doubt, make distinction in the treatment of other cases. He has given a method of wiring the jaws which is undoubtedly one that would give absolute immobility and is free from the disadvantage of silver wire, which I think a very important improvement. I abandoned silver wire some time ago, because it is not trustworthy. There are a few principles in the treatment of fracture which I try to keep in mind. One is, I never fix the jaws immovably unless I know that I am obliged to. There are many reasons for this: one Dr. Oliver himself called attention to—in case of vomiting this is sometimes a very serious condition.

Dr. M. L. Rhein, New York: What other objections to immobilization have you?

Dr. Brown: None to immobilization of the fractured bone, but much to fastening the two jaws immovably in contact with each other. One is vomiting. Again there may be septic infection. If it be a comminuted fracture there are apt to be sequestra of bone coming away, and in these, as with other cases, it is important to be able to get into the mouth and keep it clean. Again, there is the question of food and nourishment. Or, there may be other injuries which make jaw fixation inadvisable.

Dr. M. L. Rhein, New York: I agree with Dr. Brown on presentation of Dr. Oliver's improved method, and I want to emphasize strongly one of Dr. Brown's points, and that is the ultimate method of immobilization. It is often important to delay to some extent in the manner described. If there are any sequestra of bone in the fracture it is important that they should be thoroughly diagnosed as early as possible. I have a number of such cases that have slipped by the hands of surgeons without such a diagnosis having been made, necessitating a subsequent operation on the mandible. At present, with the aid of the *x*-ray, it seems impossible to make such an error, and I think this is another instance in which the value of the radiograph when it is obtainable is of great importance in determining the absolute line of fracture, as it will also readily show whether or not there are any comminuted pieces of bone necessitating operative interference before any form of immobilization is permanently used.

Dr. W. C. Fisher, New York: I think that there is one class of cases in which Dr. Oliver's method is very applicable; those that might be termed vicious. Patients who are in the habit of taking intoxicants, sometimes become very unmanageable and tear off the splints, and in such cases this method would be most desirable. I recall the case of a patient with a fractured mandible, acquired in a drunken row. After having an interdental splint in place for about a week, he became so crazy for a drink he went to a saloon and tore off the splint in order to drink. It was necessary to wire his jaw. Some method such as described by Dr. Oliver would be far better than wiring the bone.

Dr. M. I. Schamberg, New York: We have overlooked the fact that this form of treatment is applicable to all forms of fracture at or above the angle of the jaw to much better advantage than any splint which enters the mouth. Anything which tends to distend the mouth or which depends on the adjustment of a splint is not serviceable in cases of fracture at the angle or above the angle. When the fracture is at the neck or about the head of the condyle I believe that the wires should be so placed that there can be passive motion at proper intervals.

Dr. Stewart L. McCurdy, Pittsburg, Pa.: Without referring particularly to the method, it appears to me to conform in some respects to that suggested by Angle, except that he applies bands instead of wires in order to secure replacement of bones. I desire to make two points. I use iron wire. I have taken *x*-ray photographs of these iron sutures year after year during the last eight years, and find that the iron eventually becomes disintegrated and entirely disappears, so that it is harmless so far as its action on the tissues is concerned. As to the adjustment of the bone itself, being a general surgeon, I use the means at my command, just as the dentist uses the means at his command. I use the through-and-through method of wiring in all these cases. Several years ago I reported 18 or 20 cases in which this method had been used.

Dr. R. T. Oliver, West Point, N. Y.: While I do not claim that this method of treating fractures will successfully meet the requirements in every case, yet I think its application in general will come nearer being the correct treatment for more cases of fractured jaws than any other one method. Neither this method nor any other can be hailed as the universal one for all classes of cases. I merely attempt to portray a method of treating mandibular fractures, in which I bring out an original scheme of securing absolute immobilization by a process of wiring. I prefer the word adjustment instead of reduction in speaking of fractures of the jaw. We reduce luxations but really do not reduce fractures. I am not trying to change the nomenclature of surgery but this is the way it appears to me. Some one suggested that the question of occlusion or the articular plane could be dispensed with, in favor of some other things of greater importance. I want to say most emphatically that the most important thing in treating jaw fractures is to restore occlusion and reproduce the function of mastication. Even deformity must take second place to impaired function. This is especially true in the army, where the soldier's physical fitness and military efficiency is to a great extent dependent on his ability to masticate his food thoroughly in preparation for the process of digestion and assimilation, in order that his full physiological powers may be maintained. His personal appearance counts for naught. Of course there are a few cases in which impaired functions and deformity cannot be restored together, but if it comes to a question of one or the other, it certainly is for the best interest of the patient that his ability to masticate receives attention first. I believe that both anatomic and physiologic rest are essential in these cases. The earlier we can operate and get the end of the fragments together, thus facilitating the initial processes of callus formation, the quicker and less troublesome will be the cure.

The remarks of Dr. Schamberg in regard to the continuation of the old method of wiring, are rather surprising. I presume he refers to the method of using small guage silver wire by the figure-of-eight method or some modification of it. I have used and seen it used by able surgeons, many times, and its reliability in these cases is always questionable. The failures to maintain fixation and immobilization are not through technic, but through fault of the wire itself; generally it is too small and too ductile to withstand the stress of tension. In the methods spoken of by Dr. McCurdy, I believe there will be extensive oxidation of the wire used, with more or less permanent stain of the tissues and a marked metallic taste complained of by the patient.

The method I have described was developed during my service in the Philippine Islands and is the result of a gradual evolution of experimental wiring in these cases. During the early days of foreign service, before the department furnished adequate equipment, many makeshifts had to be utilized. On one occasion, I was called hurriedly to one of the reserve hospitals in Manila to attend a case of multiple compound fracture of the mandible. The man had been thrown and stepped on by his horse and was in such pain, with profuse hemorrhage, that an immediate operation was necessary. Previously I had always used silver wire—the Fleurs sutures—but there were none available at that hospital and as an expedient an orderly was sent with a note to a nearby Signal Corps station requesting some 20 guage wire. He returned with a big roll of copper, field telephone wire, from which I burned the insulation. After annealing and sterilizing, this was used and proved so efficacious and superior to the silver wire in being tougher, less ductile and possessing greater stability of the twists, that it has been used ever since.

Some one referred to the use of modeling compound. This material has proved useful in emergencies, and first-aid treatment, but I do not wish to discuss its possibilities at present as it will be covered in another article now under way.

THE FUNCTIONS OF A UNIVERSITY MEDICAL SCHOOL *

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ANN ARBOR, MICH.

The functions of a university medical school are many, varied and important. Some pertain to the school itself, some more particularly concern the university as a whole, while others are chiefly employed with affairs that lie quite outside of the university. All are correlated, however, and more or less mutually dependent. It is my purpose in writing this paper to outline briefly what a university medical school should be and some of the things that it should do.

Without men of proper intellectual and temperamental equipment no great work can be accomplished; consequently the school must be developed and directed by a faculty, the members of which have both the inclination and the ability to move forward in the right direction. A university professor should be possessed of a broad fundamental training, including both the humanities and the sciences, and on this as a foundation he should develop expert knowledge of the special subject in which he is to instruct others. His training should be both general and specialized. The former gives him a broad outlook and causes him to realize that all knowledge is correlated, while the latter is essential to every one who has any claim to leadership. Appreciation of productive scholarship in American university medical schools is growing, and the research now being done in some of the best of these schools begins to compare favorably with that of European institutions. However, it still remains difficult for university presidents and boards of control to distinguish between pseudoscholarship and real scholarship in the selection of professors, and appointment to such a position in this country is no guarantee that the appointee has either culture or learning. In this particular the university medical schools are faring better than other university schools, because in the former nominations for new professorships and to fill vacancies have been generally left to the faculty. Some universities seem to feel that they are doing their full duty if they fill one or two chairs with research men. As a friend of mine has expressed it, they act as if the possession of a silk hat is the sole requirement of a well-dressed man. The demand for productive scholarship in university medical schools should be more fully extended to the clinical subjects than has been evident up to the present time. It should be expected of each professor not only that he master his specialty, but that he labor to make worthy contributions to it. This it is that has made German medical science so pre-eminent. The old fallacy that a research man is only a dreamer, without practical knowledge, and consequently not a successful teacher, is slowly, too slowly, fading away in this country. The deepest inspiration for work comes only to the one who can occasionally drink from the head fountain of knowledge, and opportunity for research is as essential to the teacher of any branch of medicine as is air to the support of life. The university professor who does not devote a considerable portion of his time to honest and earnest endeavor to extend the bounds of knowledge is unworthy of his position and should be replaced.

The evolution of the combined course for the medical student has been an important and wise move. That it has its deficiencies is true, but there is always the opportunity for improvement. I would be pleased were it to provide for a more extended and thorough knowledge of the classics. The small requirement in Latin is not wholly worthless, but it is altogether inadequate, and the absence of any requirement in Greek is unfortunate. It is true that the medical student learns something of Greek in every subject even without knowledge of the alphabet of that language, but he too often only sees through a glass dimly, while two years of proper preparation in Greek would enable him to discern more clearly the significance of the terms that he employs daily. However, even with its deficiencies, the combined course gives at least the opportunity for the medical student to start on his professional studies from a point of great advantage. The humanities and the sciences, in their fundamental principles at least, afford him a sure and safe foundation on which he can proceed to erect the professional superstructure. The principles of chemistry, physics and biology which he has acquired are the foundation stones on which he is to build. The modern languages place within his reach most needful help. His mathematical studies give an idea of the necessity of exactness and fitness of proportion, and, as he builds, his general studies, history, literature, political economy, psychology, etc., supply the windows from

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* Read before the Sixth Annual Conference of the Council on Medical Education of the American Medical Association, Chicago, Feb. 28, 1910.

which he can look out over the wide realm of human experience. Surely, our successors in medicine, in the mass, should add much to the science and advance the practice of our profession.

Next to the selection of a proper faculty and provision for well-prepared students comes the equipment of the medical school. To this important subject I can devote only a few sentences. Fortunately the Council on Medical Education has formulated a somewhat detailed statement on this subject, and to this I refer those who wish to investigate this matter. More than thirty years in a relatively small school and observation of others, both small and large, good and bad, lead me to say in general terms that the primary cost of a suitable building and its proper equipment for a school with an entering class of from fifty to one hundred students cannot now be provided for with less than one-half million of dollars ($500,000). It should be understood that this does not include hospital facilities, which would multiply the above figures by not less than four. Moreover, it pro-
des laboratories and class rooms of only the plainest
l, and it makes no provision for any equipment above
which is absolutely essential to high-grade work.
r support of such an institution, again apart
the hospital, demands nearly two hundred thousand dollars ($200,000). With average tuition and laboratory fees the annual income of a medical school should be multiplied by at least three, better by four, in order to balance the necessary expenditures. As I have elsewhere pointed out, a medical education worthy of the name is the most expensive professional training offered in this country. The time has passed when a group of physicians can combine and launch a medical school and give anything like proper training to its students. The medical school of to-day must have behind it private endowment or state aid. Even universities should not attempt to establish medical schools unless they can afford the expenditures mentioned above, and provide adequate hospital facilities besides. To maintain a medical school inadequately is, in a certain and large sense, criminal, because it means the sending out of unqualified practitioners, and this means danger to the health and life of those whom they serve. I have elsewhere
attempted to show that the state do serves
its own interest in supplying the bes tion.

Of the functions of the medical uite
within itself, I shall refer to only the
thorough instruction of students n t,
and needs no lengthy discussion. I
the fact that in many of its bran
become an exact science, just as tru
physics, chemistry and astronomy.
anatomy, histology, bacteriology, physi
ogy. In these studies, close observa
the aid of instruments of precision, is
carelessness in method is no longer p
detection of the diphtheria or other path
the recognition of cancer cells in a tissue
tion and identification of strychnia and
poisons are exact scientific procedures, and
true of the production and employment
Without p per apparatus and its correct
these investigations cannot be made, and the
as definite and certain as those of the chemi
icist. Good int tion, affability in manner
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the diagnosis of disease, nor will they impar
surgical procedure. L seness in statement

lessness in method are not tolerable in either the teacher or the student of medicine.

Of the additional functions, some, as I have stated, lie within and some without the university. Of the former I will speak first. There are many advantages in the close association of the college and the different professional schools, which together constitute our larger universities. The collegiate department should serve for preparation for the professional schools, and the smaller colleges should also attempt to perform this function. In medicine at least the advances of the past few years have been so great that the secondary schools no longer suffice to fit the student for his professional studies. The Association of American Universities has done well in its definitions of a college and a university school. The college is regarded in these definitions as the preparatory department for the university schools which collectively constitute the university. An important function of the university medical school is to command the respect of the faculties and students of the college and other professional schools by the thoroughness of its instruction and the extent and value of its productive scholarship. The medical school should be a leader in both culture and knowledge. The uneducated, narrow man, ungrammatical in speech and of limited intellectual vision, whatever be his skill in his specialty, does not make a desirable professor in a university medical school. Scientific medicine deserves and should win the respect of the learned. In some things the medical man should be the leader.

Within the past decade a movement, such as the world has never before known, founded on medical research and discoveries, has been inaugurated and holds within itself the promise of the greatest good to the race. I refer to the realization, which is just beginning to dawn on the most enlightened men, that disease is the heaviest burden that humanity carries in its slow and
weary es the mire of superstition on its way
to the u uman bett t, and that disease is,
for the result o ignorance, and con-
sequen prevent e grows in wisdom.
Medic has ren lete discussions of
"the s istence ival of the fittest,"
etc., a strate ity of life and its
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slight abnormalities of the heart. Men who are to become sanitary engineers are graduated without training in the bacteriologic examination of drinking-water. Those who are to become potent factors in the framing and execution of our laws go from their universities in ignorance of a nation's best asset, public health.

Please do not understand that I am saying these things in a spirit of captious criticism. I might have made these statements much stronger and still not overstep the truth. I have called attention in this mild way to these defects in order to point out that it is one of the functions of the university medical school to remedy them. Medical men in these schools should give lectures and demonstrations to the students of other departments on preventive medicine. The consequences of venereal diseases should be described without magnification, and with rational advice to the unfortunate. The nature of infection and the avenues through which it is spread should be discussed. Were I not a professor of hygiene I should say that every university student should have instruction in this branch and should submit to a most thorough physical examination twice a year and should he be found to carry any infection dangerous to others, whether it be pulmonary or venereal, he should be compelled to conform to just rules and regulations. I am aware that some effort is being made in these directions in universities, and the purpose of these remarks is to encourage it, for the need is great and the result will amply repay the service.

The academic professor has somewhat reluctantly learned to recognize that scientific medicine offers a legitimate field for research, and graduate students are now permitted to work in our laboratories. We should return this compliment and urge on our students a further and broader acquaintance with psychology, history and literature, for I would not imply that the medical school is the only department of the university that may confer favors.

Only a few days ago a professor of history applied to me for a medical man who might help him in the interpretation of documents bearing on a certain period of English history. It is good for all to change the viewpoint occasionally, for by so doing we extend the field of vision and gain a clearer perception. Interchanges of opinion among men of diverse callings should be mutually beneficial.

Medicine is taking its place among the exact sciences, and in doing so it discards the mantle of metaphysical speculation which it once wore. It consists of facts gathered from the various sciences that may be used in the prevention or cure of disease. It is no longer divided into schools founded on speculative dogma, or on theories evolved from the inner consciousness. Its triumphs are won only by patient toil in the laboratory and by exact observation at the bedside. It tolerates no *ipse dixit* and acknowledges no authority save that of scientific demonstration. The world has never been in greater need of its help than at the present time. The purpose of medicine is the evolution of the better man, free from disease, both inherited and acquired. In material rewards medicine benefits most abundantly those who do not practice it. In both prevention and cure it serves not only the individual, but his neighbor as well. Its future in this country is largely in the keeping of our universities and the administrative boards of these institutions have a duty to perform which they cannot shirk without detriment to the future welfare of the people.

Of the functions of the university medical school that lie outside the university I have time to mention only two, and with these I must content myself with scarcely more than mention. The faculty should take an active part in the education of the public in preventive medicine. This can be accomplished by popular scientific lectures, given orally and disseminated in print. It should support state, municipal and rural boards of health, be ready with the best advice concerning the securing of wholesome drinking-water, the most scientific methods of disinfection and the administration of wise pure food laws. In the second place, the laboratories and clinics of the school should be open to all legally qualified practitioners of medicine, who should feel that they are welcome to turn to these sources of exact information whenever they desire to acquaint themselves more thoroughly with the advances made in their profession.

SOME NEW FEATURES IN THE CLASS METHOD OF TREATING TUBERCULOSIS *

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PHILADELPHIA

THE CLASS METHOD OF TREATMENT

The class method of treating tuberculosis has grown in popularity since its inauguration in Boston by Dr. Joseph H. Pratt on July 1, 1904. There are now many tuberculosis classes in different parts of the United States, especially throughout the East. All present certain features in common.

Each patient keeps in a special book a daily record of his temperature, pulse, food, hours in the open air, etc. Special books have been printed for this purpose, costing five or ten cents apiece, although any small note-book will answer.

The patients are visited in their homes by a paid nurse or social worker or by a volunteer friendly visitor. The visitor inspects the house, shows the patient how to live, and sees that he carries out the details of the treatment. The financial condition of the patient and of his family is investigated. In some instances direct assistance is given from the class funds (when such exist), in others appeal is made to charitable organizations, fraternal societies, religious bodies and benevolent individuals. A few classes have no visitors.

A fund is frequently provided for furnishing tents, cots, reclining-chairs, blankets, record-books, thermometers, sputum-boxes, paper napkins, paper bags, milk, eggs, olive-oil, car-fares, etc., and for erecting platforms, balconies, awnings and screens, and to meet the expenses of moving the patient to a more suitable house. This money may be supplied by a church or by a hospital or by private individuals. The expenses of the Emmanuel Church Class from July 1, 1904, to May 1, 1907, were about $2,000. Many classes, however, have no such fund, the patients themselves having to furnish the things they need or being supplied through some outside charitable agency.

Once a week the patients assemble for examination, instruction and encouragement. The physician in charge sees each patient in turn. Sometimes he also talks to the assembled class and endeavors to stimulate a spirit of emulation among the patients, posting on a blackboard the greatest gains in weight and the greatest number of hours spent out of doors. In some classes the members sit by themselves for about half an hour before the physician arrives and compare notes.

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* Read at a meeting of the Philadelphia County Medical Society, Dec. 22, 1909.

This weekly meeting is the distinctive feature of the class treatment. Its success depends largely on the personality of the physician in charge. In many instances, however, it does not differ from the ordinary dispensary hour, owing to the difficulty experienced by many class leaders in maintaining their enthusiasm while giving the same talk to the same patients for the eighth or tenth time, and in stimulating rivalry among patients who, after several months, desire to get well rather than to excel in detail.

The method of treatment adopted in the various classes depends largely on the individual views of the physician in charge and the conditions to be met. Dr. Pratt, of Boston, requires all his patients to sleep in the open air. Owing to the absence of yards, verandas or arch-ways in New York City, none of Dr. Niles' class slept out of doors. Some physicians demand of the members absolute rest; others permit graduated exercise and labor. Milk forms the basis of the diet in one class, three substantial meals in another. Drugs are little used in many classes. Some employ hydrotherapy; others do not. The same is true of the use of tuberculin.

THE UNIVERSITY OF PENNSYLVANIA TUBERCULOSIS CLASS

The tuberculosis class of the Medical Dispensary of the Hospital of the University of Pennsylvania has been in existence for over two years. Formed originally of the tuberculosis patients from my room in the medical dispensary it now receives from all the rooms in this dispensary, through the social service, tuberculous patients who are considered suitable for class treatment. There is no fund at the disposal of this class; nor is there any expense connected with it: it costs the University Hospital nothing.

The patients are visited at intervals by the social worker of the hospital or by volunteer friendly visitors. The social worker investigates the financial condition of each patient and, where necessary, solicits aid from charitable organizations or from the patient's relatives, employer, pastor or church. The visitor furnishes the class instructor with a written report of the home conditions and reports from time to time whether the instructions are being carried out.

The patients provide themselves with clinical thermometers, sputum-cups, paper napkins and paper bags, which they can obtain from the hospital at wholesale cost price. In a small note-book each keeps a daily record of the amount and character of the food taken, the number of hours spent in the open air, and in sleep, rest, exercise and work, the number of bowel movements, the amount and character of the cough and expectoration, the morning and evening pulse and temperature, etc.

The home conditions are modified according to the possibilities of the house and the patient's means. One member sleeps on the roof in an army tent. Another put his mattress on the floor of a flat roof and slept on it, bringing in the mattress when it rained. He could not afford a cot. A third improvised a tent in a corner of the yard by throwing an old carpet over the side and back fence and over a clothes-line. Still another used a pole instead of a clothes-line and a rubber sheet instead of a carpet, thereby being able to remain out in the rain. Members sleep on porches, in back kitchens and in bedrooms with windows wide open, top and bottom.

The class meets once a week. It is a class in fact as well as in name. The first hour is devoted to lectures or talks by the class instructor and his assistant; to lectures and talks given by the patients themselves; to a general clinical conference in which the patients' records are criticized by both the instructor and the class members, and instruction is given by both; to public investigations into cases that do poorly to determine the cause, from which lessons are drawn for the benefit of all; and to a quiz to find out what the members know and do.

During the second hour the patients are seen one at a time, their chests or blood examined as required, and the treatment modified to suit the individual case.

It is in the management of the first hour that the University of Pennsylvania Hospital tuberculosis class differs from all other classes. The talks by the instructor teach not only the management of the disease, but its prevention as well. Sometimes I give the same kind of talk I give when addressing a labor union or a home and school association. At other times, especially when a new member is present, I outline the life a consumptive should lead. On different days I may give short talks on fresh air, food, clothing, bathing, the avoidance of infection, etc. The reason for each measure advised is always explained. I impress on the patients the particular need for hygiene in the members of their families, and the importance of having them examined, especially on the first evidence of ill health. The possibility of the occurrence of tuberculosis without much apparent illness is emphasized. I find this very necessary, as the husband, or wife, or other relatives, or a friend, of a patient who is improving will often insist that the patient has not consumption, because the picture of health presented does not conform to their preconceived notions as to the appearance of the disease. At one time I used to encourage the patients in the belief that they would recover completely, but during the past year I have been telling them they never will be cured, although they may become strong and able to work. I constantly remind them that the germs will always lurk somewhere in their systems, ready to become active whenever the patients relax their hygienic régime, and I endeavor to make them realize that for them eternal vigilance is the price of health. This insistence on the continuation of care and precautions throughout the patient's life renders a relapse less likely.

INSTRUCTION GIVEN BY THE PATIENTS

After the patients had been told the same things a number of times I noticed that they seemed to lose interest. As it was necessary for them to hear the same story over and over again, I conceived the idea of varying the monotony by having the patients themselves occasionally give the talks. It did not take long to discover that, despite their frequent instruction, the patients' knowledge was not always accurate, clear, well ordered, or available. When a patient who is lecturing makes a mistake I invite criticisms by the other patients, frequently stopping the speaker and asking one of the others if he agrees with the speaker, and, if not, why not. I always supplement the member's talk, explaining in greater detail the matters that apparently have not been made clear and laying emphasis on what has not been sufficiently brought out.

In this way the patients not only have their own knowledge better grounded and freed from inaccuracies, but they become proficient in giving lectures on the prevention of tuberculosis and the management of the consumptive, and are thus able to repeat to their relatives and friends what they have learned in the class.

Sometimes the older members of the class instruct a newcomer, one speaking on the disposal of sputum, another on the separation of the eating utensils, another on living in the open air, and so forth, always, of course, under the direct guidance of the instructor. The new patient listens attentively to those who are themselves following out successfully the directions they are giving. When a fellow consumptive describes his own arrangement for sleeping in the yard and his scheme for keeping his dishes, knife, fork and spoon separate, these things do not seem so impracticable and visionary to the skeptical new patient as when ordered by the physician.

When the instructor examines the patients' records he comments favorably or adversely, and also invites criticism from the class. A patient who has done poorly is made to describe in detail his life during the previous week, while the instructor and class try to discover the reason for his going backward. His error then furnishes a text for a talk by the instructor or by a class member. In this way all profit by the experience of each and are prevented from making similar mistakes.

In order to make sure that the patients do not forget what they are taught, they are questioned from time to time as to what they are doing and the reasons for it.

RESULTS OF THE CLASS TREATMENT

The results of this class treatment have been excellent. Nearly all the patients showed improvement. Large gains in weight were common. A great many patients, including some in the third stage of the disease and one who had suffered from severe laryngeal ulcerations, resumed their occupations. One man with cavities, whose fever remained over 103° for weeks at a time and who at first had to be kept at absolute rest, was walking five miles a day without fatigue and gaining in weight when he left the class to enter a sanatorium. A youth, who, in addition to his pulmonary lesion, had had two different severe attacks of bone tuberculosis with necrosis, worked eight hours a day, and in addition during the summer played on a ball team every evening and Saturday afternoon. He even started to play football until I found it out and stopped him.

An active educational campaign is carried on by the class patients. By precept and example they instruct relatives, neighbors and friends. The following case illustrates the amount of good they can accomplish: A patient always told her husband what she learned in the class. He, in turn, repeated the talks to his fellow workmen, with the result that ventilators were installed in the building where he was employed and windows were raised, and at noon instead of resting in the warm stuffy office, as formerly, many of the clerks took long walks. Some of the employees tried to convert their wives to proper hygienic living, and when a wife objected to fresh air at night, got up after she had fallen asleep and gently opened the windows. This same patient visits other persons known to have consumption or supposed to have "a cold" or "chronic cough," sees that they are properly looked after, and gives them advice and encouragement. She is now one of the friendly visitors of the Philadelphia Society for Organizing Charity.

A patient who was operated on for hemorrhoids in one of the general hospitals had to teach the nurses there how to keep her dishes separate and how to prevent her from becoming a source of danger to the other patients.

Two of the members who took up tuberculosis nursing surprised the other nurses with their knowledge concerning the management of the disease and their skill in taking pulse and temperature.

CASES SUITABLE FOR CLASS TREATMENT

I regard every ambulant tuberculous patient as suitable for class treatment. A high degree of intelligence is not essential. The instructor should be able so to present the subject that any mind can grasp it. I do not recognize the existence of the "unteachable consumptive." Even careless and combative persons have been inspired and spurred to action by their association with earnest and enthusiastic fellow sufferers, all eager to get well and to help each other.

The only really unsuitable patients are those who should be confined to bed for long periods of time. Yet I have sometimes included such in the class when it was impossible for them to procure a physician or gain entrance to a hospital or sanatorium. They either get out of bed every week or two to attend the class or a relative brings the patient's record to the class meeting and reports on his condition.

Some classes graduate the members when the disease is arrested and the patients are able to return to work. It is my belief, however, that they should always remain in the class, even if they attend but once a month. A number of the members of the University of Pennsylvania Hospital class are working. In fact, it is often these persons in whom the process has been arrested that are most in need of supervision, as they tend to become careless and in consequence suffer relapses.

ADVANTAGES OF THE CLASS METHOD OF TREATMENT

For ambulant cases the class method is, to my mind, the best method of treating tuberculosis. Its educational value to the patient, to his family, and to the public cannot be excelled. The patient learns how to live and work so as to keep well himself and not infect others.

In the ordinary dispensary there is not the time for the oft-repeated instruction and the constant questioning to find out whether the lesson has been well learned. Without the patient's record and the nurse's report it is impossible to know how thoroughly the directions have been carried out. The inspiration and spirit of comradeship engendered by the class is missing in the ordinary dispensary.

In the sanatorium the patient lives in a tent or shack or other building especially adapted for the fresh-air treatment, with every moment of his life outlined for him. Returning home to unfavorable surroundings and to people unfamiliar with the management and prevention of the disease, left to his own resources and often lacking the ingenuity to adapt the changed conditions to the life he should lead, he only too frequently falls back into the old ways that first rendered him susceptible to tuberculosis, relapses, and dies. This outcome is rendered more likely when the sanatorium treatment is made unpleasant as well as rigorous, in order that the patient shall not want to remain long, but shall try to be cured in six months and to remain cured, so that he shall never have to return. In such a case the patient comes to regard his treatment as something disagreeable, to be endured for six months for the sake of being cured, but to be avoided ever after. When proper living is forced on an unwilling patient by the discipline of an institution it is not so likely to be followed, after the removal of restraint, as when the compelling force comes from the patient himself, from his own understanding of the importance of, and necessity for, this mode of life.

The class method of treatment should be carried out in every tuberculosis dispensary. The increase in effectiveness will certainly justify the slight additional work or cost. Nor need there be any extra expense.

If class instruction were given to all sanatorium patients and if on leaving the institution they join a tuberculosis class, the good results obtained in sanatoriums would doubtless be more lasting and relapses less frequent.

I know of no other factor in the fight against consumption at once so available and inexpensive and withal so far-reaching and so lasting in its effects as the properly conducted tuberculosis class.

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GONOCOCCUS VULVOVAGINITIS IN CHILDREN

WITH RESULTS OF VACCINE TREATMENT IN OUT-PATIENTS

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Increased scrutiny in examining little children for admission to hospitals, asylums, day nurseries, kindergartens and other institutions has led to a surprising increase in the number of cases of gonococcus infection of the vagina seen in out-patients. The treatment of this class of patients, surrounded, as they generally are, by uncleanliness and poor hygiene, living in crowded tenements in families with no knowledge of the highly contagious character of the disease, has become a problem of much importance. A careful record has been kept of all the cases referred to the Vanderbilt clinic during the past three years, the total number of proved gonococcus origin being 344. These cases constituted a separate class in the department of pediatrics, and, through the interest of Dr. L. E. LaFetra, chief of clinic, additional facilities were extended regarding nurses and supplies. In the microscopic examination of smears from the vaginal secretion in all these cases, the organisms were decolorized when stained by Gram's method. All cases from which the smears showed either extracellular organisms, or those which were not decolorized, are excluded from these statistics. In many instances the first and second smears failed to show the gonococcus, but subsequent examinations revealed it. The doubtful or "suspicious" cases showing many leucocytes in the stained smears of the secretions are *not* here considered.

With the older children an endeavor was made to discover the extent of invasion by the gonococcus at the time of obtaining the smears, to find in what proportion of cases the parts beyond the hymen were involved and how deeply the gonococcus penetrated. A piece of glass tubing, 3 inches long, 1/4 to 5/16 of an inch in diameter, its lumen at least 1/8 of an inch, was threaded with a string to whose middle was tied a cotton plug. The ends of the loop were then tied and the portion passing through the tube was drawn on so that the plug became firmly fixed in one end of the tube. The whole was sterilized and then introduced into the vagina as far back as the posterior cul-de-sac; the cotton plug, to prevent contamination by the secretion about the vulva, was then removed by drawing on the outer string, a platinum loop was then introduced through the lumen to the posterior cul-de-sac and a loopful of the secretion was removed.

It was possible to examine 40 cases in this manner. The very important result of these investigations was that in every one of the 40 cases gonococci were found to have invaded the upper part of the vagina.

In 15 cases in which the hymen was not intact, a visual examination of the cervix was made by means of a male urethral speculum and head mirror; in but one case the cervix was congested and slightly inflamed; in all the others the cervix was tightly closed and sealed by the normal mucous plug. The cervical canal, endometrium and their adnexa are apparently very seldom infected by continuity in little children.

AGE

In the 344 cases observed, the average age of the patients was 5.1 years; the youngest was 3 weeks; the oldest was 12½ years. One hundred and fifty-one patients were under 5 years, the remaining 193 being over 5 years of age.

ETIOLOGY

	Cases.
Discharged from hospitals	60
Referred from day nurseries and kindergartens	24
Referred from orphan asylum and foundling home	3
Mother giving history of leucorrhea	70
Mother giving no history of leucorrhea	75
Sleeping with sister giving history of vaginal discharge	28
Sleeping with sister giving no history of vaginal discharge	29
Sleeping with child giving history of vaginal discharge	3
Sleeping with child having ophthalmia	2
History of "attempted rape"	1
Unknown etiology	49

In 4 cases there was direct evidence that the father, mother and the child all suffered from gonococcus infection at the same time, the father having the original urethral infection.

In 8 instances there was direct evidence that the mother had had a discharge shortly after marriage. In these cases there was urinary evidence of a previous urethritis in the father.

There was one instance of infection of 4 children of one family; 3 instances of infection of 3 children of one family; 19 instances of infection of 2 children of one family. In 7 hospital cases and 4 which were not hospital cases, the infection had followed scarlet fever.

DURATION OF VAGINAL DISCHARGE PREVIOUS TO COMING UNDER TREATMENT

	Cases.	Average Age, Years.
5 years	3	8.2
4 years	4	7.6
3 years	2	8.1
2 years	9	8.0
1½ years	22	4.6
1 year	12	3.1
6 months to 1 year	52	4.5
6 months to 3 months	55	5.3
3 months to 1 month	42	5.9
Under 1 month	143	5.2

SYMPTOMATOLOGY

Most of the cases gave a history of burning micturition, without undue frequency, at the onset of the discharge.

Edema of the vulva was generally present, but of short duration after treatment was instituted.

Discharge was present in all cases, the majority having the thick, yellow purulent type. The length of time the discharge remained purulent depended greatly on the cleanliness of the mother, being in inverse ratio to her efforts. Clean underclothing and frequent bathing of the vulva shortened the time of the purulent discharge. A mucous discharge, so small in amount as not to stain the child's clothing, may be indefinite in its duration and contagion. This was proved in many cases in which the patients returned to the clinic, when requested by postal card, after no treatment for a period as long as two years, the mother thinking the child cured when the clothing was not stained by the discharge. The gonococcus was present in 14 cases out of 61 patients who returned, with no treatment for periods from two years to six months. These 61 cases had previously been discharged as cured, after local treatment by irrigations.

COMPLICATIONS

Ophthalmia from auto-infection strangely enough occurred in but four cases; one of these resulted in marked corneal ulceration and partial blindness.

Arthritis was present, as far as ascertained, in only 3 cases; 2 involving the ankle and 1 the knee. It is presumable that more cases occurred, but it was difficult to obtain any such history on account of the cases being out-patients.

Nocturnal enuresis, not pre-existing, was present in 10 cases. The majority of these cases improved with local cleanliness.

Inguinal adenitis was very infrequent, occurring in only 2 cases. Neither one suppurated, subsiding under rest in bed and local applications.

No cases of cystitis or urethritis were observed, and there was not a single instance of pelvic or general peritonitis, though such cases have been reported by others.

In a number of the older children, masturbation was most likely a factor in prolonging the inflammation and the discharge.

TREATMENT

Printed instructions were given to each mother containing information and directions on the following points:

1. Vulvovaginitis in little children is a local contagious disease which requires treatment until the physician pronounces the child cured. It sometimes persists for months.

2. To avoid infecting other members of the family, the hands should always be washed thoroughly both before and after bathing the parts. The discharge, if carried to the eyes, may cause blindness.

3. The child should sleep alone. No one else should use any toilet articles, towels, napkins or wash-cloths used by the patient. All napkins, sheets, underclothing, towels and wash-cloths should be either boiled or immersed in a phenol solution before washing. Bath-tubs, basins and everything else coming in contact with the patient should also be washed with this solution.

4. It is advisable that all children with this disease should wear a napkin or pad, which should be changed daily.

5. Parents are cautioned not to allow the child to mingle intimately with other little girls. The child should not attend school or day nursery lest other children become infected.

6. The parts should be cleansed externally at least four times daily with a solution of borax or boric acid crystals, one teaspoonful to a pint of boiled water.

TREATMENT BY IRRIGATIONS

The following irrigations were tried:

1. Potassium permanganate, 1 to 4000 solution.
2. Condy's fluid,[1] 1 dram to a pint (this is a solution of potassium permanganate and alum sulphate, in which, by the combination, a larger amount of available oxygen is evolved)
3. Physiologic salt solution, 0.9 per cent.
4. Boric acid solution, 3 per cent.
5. Formalin solution, 1 to 1000.

The best results as regards cleansing were obtained with Condy's fluid.

The following instillations, in each of which two drams of the solution were instilled, were tried in conjunction with the irrigations:

1. Silver nitrate	1 to 5 per cent. solution.
2. Protargol	1 to 10 per cent. solution.
3. Argyrol	20 to 50 per cent. solution.
4. Ichthargan	½ to 5 per cent. solution.
5. Collargol	1 to 5 per cent. solution.
6. Ichthyol	1 to 10 per cent. solution.
7. Emulsion *Bacillus bulgaricus.*	10 to 50-per cent. solution.

Treatment by tampons of ichthyol, 5 per cent. and ichthyol 2.5 per cent. with iodin 1 per cent. and hydrastis 5 per cent., were tried with poor results.

Suppositories of 10 per cent. ichthyol were used with no permanent results.

Each mother was instructed in the clinic and at her home in the care of her own hands, both before and after the treatment, the preparatory cleansing of the vulva, the preparation of the douche, the sterilization of the catheter and the introduction of the catheter. This was done by actually making her give the douche in the clinic, by printed instructions and by the nurse visiting the home to see that the treatment was properly carried out. The nurse's visits were continued if the patient did not make a weekly visit to the clinic, as was ordered in all cases. When patients lived at a distance, postal cards were sent to them, and in this way a fairly close record of the attendance was kept. The danger of "overtreatment" was reduced to a minimum by frequent examinations of the child at the clinic.

The method of treatment was as follows: The child was placed in a dorsal position with the thighs flexed on the abdomen. The labia were held apart while the vulva was carefully sponged with an antiseptic solution (1 to 4,000 bichlorid of mercury). The sterile catheter attached to a fountain syringe, after being anointed with sterile lubricant, was gently introduced into the vagina. Two quarts of solution were used as the irrigation. Once weekly this routine was carried out in the clinic, and an instillation of one of the astringent silver preparations was given before the catheter was removed, by means of a glass hand-syringe. The foot of the table was kept elevated and the instillation was allowed to remain for a period of five minutes. Irrigations were given by the mother at stated intervals at home; if the secretion was profuse they were given daily, the intervals were made longer as the secretion lessened in amount. Irrigation solutions were tried at varying temperatures, ranging from 105 to 120. No apparent benefit was noted following temperatures over 110.

TREATMENT BY VACCINES

Following the results of Cole and Meakins[2] in the use of vaccine therapy in gonorrheal arthritis in adults, the record of 25 cases reported by Butler and Long[3] and 41 cases reported by Churchill and Soper,[4] the two latter in children with vulvovaginitis confined in hospitals, the same treatment was undertaken in out-patients. Eighty-four patients in all have been treated by this method. Because the patients were out-patients, because of the lack of time and because of the experience of others in the use of the vaccine in adults, I omitted taking the opsonic indices, except in a few of the early cases. I do not deem it necessary to take the opsonic index, as there seems to be little relation of the index to the vaginal discharge.

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[1] Condy's fluid, according to the National Dispensatory, is made by mixing 53 parts of potassium permanganate, 333 parts of crystallized aluminium sulphate, and 777 parts of hot water. On cooling, potash alum crystallizes out, which is separated from the liquid. The latter hence consists of a solution of potassium sulphate and permanganate of aluminium. The U. S. Dispensatory states that "all the available oxygen of the permanganic acid is utilized, whereas only 60 per cent. of this amount is utilized with the simple alkaline permanganate."

[2] Cole, Rufus I., and Meakins, J. C.: Treatment of Gonorrheal Arthritis, Bull. Johns Hopkins Hosp., June-July, 1907.

[3] Butler, W. J., and Long, J. P.: Vaccine and Serum Treatment of Gonorrheal Vulvovaginitis in Children, THE JOURNAL A. M. A., March 7, 1908, l, 744.

[4] Churchill, F. S., and Soper, A. C.: Inoculation Treatment of Gonococcus Vulvovaginitis in Children, THE JOURNAL A. M. A., Oct. 17, 1908, li.

Three separate vaccines were used:

1. Vaccine prepared from 16- to 18-hour blood-agar cultures from acute male urethritis, prepared after the method devised by Wright by Dr. R. V. Lamar of the Rockefeller Institute for Medical Research. The strength of the emulsion was 100,000,000 killed bacteria to 1 c.c.

2. Vaccine from a stock culture at the Presbyterian Hospital belonging to Dr. J. C. Meakins. The strength of this emulsion was also 100,000,000 to 1 c.c.

3. Stock vaccines prepared by Parke, Davis & Co., the strength of which were 50,000,000, 100,000,000 and 500,000,000 per cubic centimeter. No attempt was made to use the autogenous or personal vaccine from the patient's own organisms.

The injections were made under strict asepsis into the gluteal muscles with an ordinary glass hypodermic syringe. In using small quantities of the vaccines, sterile physiologic salt solution was employed as a diluent.

The number of vaccinations in the individual cases varied according to the age, severity and chronicity, the smallest number to accomplish a cure being four and the greatest number being eighteen.

In endeavoring to arrive at some conclusion regarding the dose of vaccine to administer to children, I selected an older child who had been affected for a long period and whose parents were more intelligent than the ordinary out-patient. A large dose was injected for three consecutive days, the child being put to bed under the constant care of a trained nurse. This child was 8 years of age and had been treated by the irrigation method for seven months. I injected 1,000,000,000 killed bacteria into her buttock at one dose each day, and had her temperature and pulse taken every two hours. She not only showed no rise of temperature, but no local reaction whatever and no subjective symptoms.

In the majority of cases, regardless of age (except under 6 months) I started the treatment by an injection of 50,000,000 every fifth day, increasing the dose by 10,000,000 until five injections were given, i. e., 90,000,000. The interval was now made ten days before another was given. Smears of the remaining secretion were taken and stained by Gram's method at each visit after the fifth injection. In most of the acute cases six injections were sufficient for a complete cure. In the cases of long standing it was necessary to use an increased number of injections, bringing the dosage up to 200,000,000.

No patient was pronounced cured unless free from gonococci by Gram's method, once weekly for four weeks and two additional examinations at intervals of two weeks. If no gonococci were present after these six examinations and no discharge evident, I considered the child cured. I have had 19 children return to the clinic after a period of three months following their sixth examination and found no evidence of the infection present.

Occasionally an extremely slight local reaction took place, but this in every case subsided in twenty-four hours. The reaction was never sufficient to cause any pain or tenderness. General constitutional disturbance never occurred following any of the injections. Temperature charts were kept of the cases, the temperature being taken twice daily by the visiting nurses, who visited the patient's home while active treatment was being given.

No distinct rise in temperature following an injection was noted in any of the cases. No local treatment whatever was used, except external bathing, if excessive discharge was present. No irrigations were given.

Of the 84 cases treated by vaccines, 16 were of long standing which had been treated by other methods. In the majority of these 16 cases permanganate irrigations were previously used. Gonococci were present in all before instituting the vaccine treatment. These latter cases required a larger number of vaccinations and an increased dosage.

RESULTS

Treatment.	Total No. of Cases.	Cured.	Uncured.	Lost.	Per Cent.
Irrigation	260	158	53	49	60
Vaccines	84	76	5	3	90

Average length of time under active treatment by the irrigation method, 260 cases, 10.1 months.

Average length of time under active treatment by the vaccine method, 84 cases, 1.7 months.

Of the 84 patients who were given the vaccine, 16 had been under the irrigation treatment for long periods. Three of these patients were not benefited, 1 did not return and 12 were cured. Some of those who did not respond to the treatment with one vaccine frequently did well on one of the other vaccines. In the cases in which there was no benefit, new strains were used; increased dosage, less frequent dosage and more frequent dosage, was tried but with negative results. The 5 uncured patients were all over 5 years of age, two of them being over 9 years. Contrary to the findings in some other published results, in young infants, under 1 year of age, three cures were obtained by the vaccines, the youngest patient being 3 weeks old.

CONCLUSIONS

Vaccine therapy has a place in the treatment of this infection in little children for the following reasons:

1. The short time required for a cure in over 85 per cent of cases.

2. The ease of administration of the vaccine; no special apparatus or knowledge of technic being necessary.

3. The vaccine is apparently harmless when used under aseptic precautions.

4. It is not necessary to take the opsonic index, with its complicated technic.

5. It eliminates irrigations, which direct the child's attention to its genitals, at times encouraging precocious masturbation. The frequent douches necessary in the irrigation treatment will, with the best care and gentleness, produce some injury when continued over a long period of time.

I wish to express my thanks, for the clinical cases referred to me from other hospitals and clinics, to Dr. R. V. Lamar of the Rockefeller Institute for Medical Research and Dr. J. C. Meakins of the Presbyterian Hospital, for cultures and vaccines, and finally to the visiting nurses' staff of the Vanderbilt Clinic, who have aided in making this record of cases possible.

125 West Seventy-sixth Street.

BOTTLED MILK AS A HEALTH MEASURE

AND SOME OF THE DIFFICULTIES ENCOUNTERED IN SECURING A PURE MILK-SUPPLY

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There is to my mind no more important matter for public consideration and action than the one of pure milk-supply, for the manifest reason that on this food product at least 50 per cent. of the present, and probably each succeeding generation, will depend for subsistence.

The best records up to 1910 show that ten bottle-fed babies die to one that is breast-fed. It has been demonstrated, within the past five years especially, that there is no reason to believe that the alimentary canal of the average infant is often incapable of digesting the food necessary for normal growth and development, when the food supplied, even though this is cow's milk, is of suitable quality and quantity; indeed, since strenuous hygienic lines have been drawn by men of our profession in some cities throughout the country the mortality rate has been lowered 20 per cent., and in a few cities, where the contest has been waged with great vehemence and intelligence, 50 per cent. salvation has been achieved.

If we would form anything like an adequate conception of the loss in mortality to child life, due wholly to filthy and adulterated milk, we shall need make some inquiry into statistical records along these lines. The reports of the U. S. Census Office for the year 1905 declare that the malign effects of artificial feeding of infants and the consequent impress made on the mortality returns become manifest by an examination of the vital statistics, but to gauge the exact ratio of infant deaths resulting from artificial feeding is very difficult. We have some very startling figures in this report, however. In a registration area with a population of 33,000,000 there were 105,553 deaths among infants under one year of age. Diarrhea and enteritis caused the death of 39,399 children in the first year of life. The U. S. government report for 1908 shows a total of 400,000 deaths of infants, and the report concludes that 200,000 of these could be prevented.

"About one-fifth of the total loss of life in the first year after birth," writes the Registrar-General of England, "takes place within a week of that event, while by the end of the first month the proportion reaches one-third, and by the end of the third month it exceeds one-half. From the first to the fourth month diarrheal diseases steadily increase in destruction."

In Paris and the cities in France having over 30,000 inhabitants the deaths from diarrhea by months per thousand infants under one year were as follows: June, July, August, September and October the average was 525, or more than one-half of all born during these months succumbed to gastro-enteric trouble.

According to Behring of Germany, of every 1,000 children born alive, 235 succumbed during the first year of life. Only 510 out of every 1,000 males born attain manhood. Not more than a third of those reaching maturity are found to be fit for military service. These sad facts he attributes very largely to the ulterior effects of infection derived in infancy from milk.

In the face of these astounding figures and facts we find that to better these conditions, which have cost and are costing us so dearly, is a problem of gigantic proportion and the elements entering into its solution are varied and complex.

In the first place, as soon as any one attempts to institute reform measures he meets with opposition on the part of the producers. This opposition is due to two causes—ignorance and a desire to receive the largest possible return for their product with the least amount of outlay. Of course, this second reason is really based on the first, ignorance, for it is now a well-known fact that our most up-to-date milk producers, those giving the most careful heed to all matters pertaining to sanitation, are really the men to whom the business is worth while from a financial standpoint.

While I have placed the milkmen, or rather their filth, first in the enumeration of factors in the death-rate of children, I do not regard them as our greatest foe, for they can be educated, coerced by law, or eliminated from the business by reason of non-compliance with the regulations affecting their product.

It has been my observation that time-serving politicians who have the appointing of boards of health, and their political allies, are the greatest menace to the furtherance of measures to prevent this onslaught on these helpless children. This condition of affairs prevails on the part of these office-hunters by reason of, first, their inordinate desire for office at any price—even at the cost of human lives; second, their ignorance of the grave questions involved in settling matters pertaining to higher sanitation, and, therefore, their utter inability (or, if not inability, unwillingness) to select men for this important work who have the intelligence, perseverance and firm decision of character to stand for the right at any cost. In other words, men are selected whom they believe they may dominate or control in the interests of their party.

Some of you may think I have overstated the condition that obtains throughout the state. Let me, therefore, refer to a few facts gleaned from the history of a certain municipality within this state having 125,000 people. The mayor stated before the council that the board of health of this particular city had been extravagant in that they had raised the salary of the clerk of the board from $1,000 to $1,500 and the salary of the health officer from $1,100 to $2,000 (although he, the mayor, was drawing $5,000 and his own clerk $2,000). He further stated that members of this body had exceeded their authority in that they had employed one extra meat inspector, making two for the entire city, with more than thirty slaughter houses to inspect, besides hundreds of markets throughout the city. This statement was made in the face of the fact that the statutes give to the board of health the right to employ as many meat and milk inspectors as they may deem necessary to carry on the work of sanitation. Not only do we find personified ignorance of the matter to which I have above alluded, but we find in this same municipality this same office-seeker siding with milkmen whose bacterial count runs into the millions, and the temperature of whose product was as hot as the streets on which it was being hauled during the days of July and August. I could go on *ad infinitum* touching these matters pertaining to this municipality, but suffice it to say that in the election the mayor received the votes of every man who was opposed to bottled milk, of every voter who desired to sell tuberculous and cancerous meat, of every citizen who had the right of franchise who was opposed to lifting his produce from the sidewalk a distance of two feet, so that it could not be contaminated by dogs, etc. He was sustained at the polls by every meat vendor who was opposed to screening his meat in the market to protect it from the deadly germ-carrying flies, and by every foreign and domestic voter who desired to supply so-called ice-cream, made from the most questionable products in most questionable quarters and containing in many instances not more than 4 per cent. butter-fat. Those engaged in peddling this product in cones (the latter handled by individuals whose personal habits as to cleanliness were superlatively bad, and whose practices in this line of dangerous work had been prevented—stopped—by effective legislation) supported him. In the last place, although not least, all the citizens who desired to run their businesses 365 days and nights of the year, except, it may be, on election days, supported this mayor that they might run in open defiance of a law which he had taken an oath to respect and execute.

He and his friends refer to his administration as a "business administration." Who pays the price? Can you count the cost of such a business administration?

This last illustration may be a little foreign to the qustion at issue, and my only object in referring to it is to show, or perhaps further to emphasize, that if we would obtain the highest standard in matters of sanitation and life saving, the work of departments of health must be divorced as far as possible from politics as politics is now understood and practiced in many cities and towns throughout this country.

I am not criticizing the man or the citizen, but the politician and those who control his political action in adopting methods to further political ambition at the cost of human life.

It is argued and apparently believed by many of these politicians to whom I have referred that the work of the health officer is of minor importance and that young and inexperienced physicians are glad to take the place for $1,000 to $1,200. That may be true, but we know that such men as these are overpaid even at such salaries. The fact is that, if progress is to be made along these higher lines, the work demands the most symmetrical, experienced and generally well-informed man that can possibly be secured for this very important work, and it is an insult to our profession to ask that this work be done for such compensation as I have mentioned.

It occurs to me that a member of the board of health should have license to state the truth and the whole truth regarding these obstructions to the securement of better and saner policies along these lines or matters in question, for throughout this state each member serves without financial compensation, and his only reward can be a knowledge of a duty well performed, and no one, therefore, may truthfully say of him that he is disgruntled by discontinuance of service.

As to bottled milk as a health measure I beg to recite some experiences in my own city touching this question. Notwithstanding strong organized opposition, the Board of Health of the City of Dayton passed and successfully fought through the courts a bottling regulation or provision which, when executed, will save scores of young lives every year. Inasmuch as the provision is the first of the kind within the state, and for that matter in the United States, I have thought it might be of interest to give it here *verbatim*, with the salient points, as well as those specifically controverted.

Section 1.—No person, firm or corporation, except such as may sell for consumption on the premises where sold, and dealers in dairy products exclusively, shall sell, offer for sale, expose or keep with the intention of selling any milk or cream, or both, in the City of Dayton, Ohio, unless such milk or cream is kept, offered for sale, exposed for sale, or sold in tightly closed and capped bottles or receptacles of a similar character which may be approved by the board of health of said city; the owners and operators of dairies, and all drivers of wagons who sell milk or cream at retail or deliver the same from wagons, shall carry, sell and deliver such milk and cream only in bottles or other approved receptacles as aforesaid. All milk and cream so sold in bottles or other receptacles, not to be consumed on the premises where sold, shall be taken and carried to the residence of the purchaser or plade where intended for use in the said bottles or receptacles, and not otherwise.

Section 2.—No milk or cream shall be sold, offered for sale, exposed for sale or kept with the intention of selling in or at any milk depot, creamery, store or other place of business, unless such milk depot, creamery, store or other place of business shall be equipped for keeping said milk and cream, and the same shall be kept therein, at a temperature of 50 degrees, or lower, Fahrenheit.

Section 3.—The provisions of Section 1 of this regulation shall not apply to *bona fide* dealers in milk and cream at wholesale who shall sell at any one time a quantity of not less than two gallons of milk or two quarts of cream, and who shall each have a separate room in which said milk and cream shall be kept or offered for sale, with a floor space at least ten feet square, with suitable ventilation, and provided also with an additional room in which shall be washed and cleaned all cans, bottles, or other receptacles, and utensils of every kind used in connection with said business, all of which shall be subject to the approval of the Board of Health.

In a suit brought to test the validity of this regulation the plaintiff contended that it was unconstitutional and void, that it was unreasonable, that it was burdensome, that it was partial and did not act with uniformity on persons of the same class, and that it made unjust discrimination between them, and that it destroyed vested property rights, etc. Of course, in our answer we denied all of his allegations, except that he was engaged in the dairy business. We held that the purpose for which the regulation was passed was one of sanitation and preservation of health, first, to secure to the customer an equal distribution of butter-fat or a requisite amount required by law, 3 per cent. (a result out of the question under the old method of dipping from the cans); second, to prevent the delivery of milk to customers in unclean vessels furnished by them; third, to prevent dirt, dust and disease germs from coming in contact with the milk.

The court held that, in so far as the first purpose was concerned, the seller is not required to distribute the butter-fat equally among his customers. If he brings his deliveries up to the standard required by the Revised Statutes, 4200-12, he has met all the law of the state demands. We contended, and do now contend, that it is not only unsafe for the dairyman to attempt legal fulfilment of the law by handling of milk in cans for retail, with the dipping process, but that it is unsafe to the customer, in that he is cheated of one of the essential factors in milk necessary for the life and sustenance of children, to say nothing of the dangers of contamination under the old process.

As to our second ground the court said: "It is certainly not fair to impose regulations on one man because of the negligence or folly of another" (referring to containers placed out by customers for the reception of milk). Then the court proceeded to the third reason or ground held by us for requiring bottled milk, to wit: that dirt, dust and pathogenic germs come in contact with milk in cans which are being continually opened for the dipping of milk. This was given by the board, as the principal reason for the adoption of the measure in question and was held by the court, after hearing all the evidence, to be reasonable and in conformity to law and common decency.

One fly falling into the pail has been shown to be capable of introducing 250,000 germs into the milk. Now, in some of the streets and alleys through which these milkmen drive their wagons, and from which they dip here and there to supply their customers, are not garbage-cans full and running over with morbific matter, which in some cases has been standing for weeks, without municipal interference, at a temperature of this climate in July and August? In the poorer sections are not these garbage-cans the receptacles into which cuspidors have been emptied, filled with sputum deposited there from the cavities of lungs of individuals in the last throes of consumption? Flies which have fed thereon and which have their bodies and legs teeming with the germs of tuberculosis leave this morbific feast to follow the milk-wagon and sup on the fresh milk that has fallen from the filthy dippers; not infrequently they fall into the can as the lid is removed to supply the next customer.

It needs no argument to convince one that milk delivered in bottles may be as insanitary and as disease-producing as that delivered in cans. Milk is no cleaner than the dirtiest thing it touches. Any bottles, can, pail, cooler or other appliance, if dirty, is a source of contamination. I am presuming when dealing with the bottling measure that the cattle have been tested for tuberculosis. This, however, is presuming too much, for many, many herds throughout this state are alive with tuberculosis, as was one recently supplying milk to Dayton, where, when the test was made by the state examiner at our instance, every cow of the entire herd of thirty-one was condemned and destroyed; and I wish to add that this important question of state inspection must be taken up in a way that will eliminate this great danger.

Under this regulation, I presume that the barn, the source of water-supply, the utensils used in milking, the toilet of the milker, the condition of the cow as regards cleanliness, is all that may be desired, or has passed muster of the dairy inspector. I contend that the milk so secured and delivered other than in bottles is a most flagrant source of disease and death.

It is indeed, a most difficult problem to render a can which has been used for some time sterile. The seams and indentations about same are most difficult, indeed, if possible, to clean, whereas bottles have a smooth surface and, too, are transparent, so that much may be discerned by inspection both by the seller and the buyer. By adhering to the following technic (all other precautions which I have enumerated having been followed out) the dealer will place a product within the hands of the consumer that means salvaton to children who have hitherto been sacrificed to dirt and greed.

First, wash the bottles in pure cold water; second, scrub them thoroughly with a brush, using hot water and some good soap powder; third, rinse them again in hot water; fourth, scald them out thoroughly with boiling water (steam is preferable to boiling water and should always be used when at hand); containers should be subject to boiling water or steam at least from five to seven minutes at a temperature of 212.

The temperature at which milk is held after cooling has much to do with its quality and fitness for food, especially for infants and children. One germ in milk at a temperature of 70 degrees will multiply itself 250 times in twenty-four hours. It is practically out of the question to deliver milk in cans in retail without the temperature of the milk reaching 70 degrees and above during the summer months or heated term; this means a product running into the millions of bacteria, both common and pathogenic; whereas in bottled milk, if the precaution is taken to which I have alluded, and these bottles filled with milk placed in crates surrounded by ice, a delivery should be made at a temperature never exceeding 60 degrees.

It is remarkable what may be accomplished by legislation and execution of the legislation touching these matters of cleanliness.

Men who have hitherto appeared to be wholly indifferent to all these important points of sanitation will be found inquiring diligently what they may do to be saved. It is then that a campaign of education may be of great benefit.

Dairy inspectors should be instructed (and they should be high-class men, possessing scientific knowledge *on this subject) to advise the producer along all practi*cal and scientific lines touching his product. The producers should be supplied with the practical literature furnished by the U. S. government touching all points in question.

The health officers should meet the producers in their dairy association and show them that for them to take higher rank and furnish a clean and safe supply of milk is for them not only to enhance their own financial well-being, but thereby to become great public benefactors and saviors of their race.

The matter of the urgent necessity of great care in the handling of all food products by reason of the dangers arising from carelessness is emphasized in a well-known case reported by Dr. George A. Soper,[1] that of a healthy woman, a cook, who had lived in many different families during a period of ten years preceding 1907, in each of which there developed in from 3 to 4 weeks after the cook had entered on her duties, typhoid fever among members of the household. In all twenty-eight cases of this disease were traceable to this source. The cook was removed to a reception hospital for observation. She denied ever having had the disease. Examination of the blood and urine was negative, but the bowel discharges were found to furnish cultures of the typhoid bacillus. The mode of infection is clearly indicated by the woman's occupation, and is a sad commentary on her personal habits of cleanliness.

It should be insisted that examiners or dairy inspectors inquire, not only subjectively but objectively if necessary, into the personal physical condition and habits of the handlers of milk.

During my administration as president of the Board of Health of Dayton many cases of what should probably be regarded as criminal negligence along this line have come to my attention. Nothing but the closest scrutiny on the part of those in charge of the work will eliminate this source of danger.

This work of reformation is an arduous one and one fraught with much discouragement. None but the strongest heart and bravest soul need enter the ranks, but those who are clear of head and honest of heart need not fear for their reward; it may not come in dollars and cents, but it will come, and come with a sense of duty well done.

307 Reibold Building.

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[1] Soper, George A.: The Work of a Chronic Typhoid Germ Distributor, THE JOURNAL A. M. A., June 15, 1907, xlviii, 2019.

AN IMPROVED METHOD OF TRACHELORRHAPHY

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The operation of trachelorrhaphy has so often been unsatisfactory that the tendency has been to substitute amputation of the cervix. Repair of the cervix, however, is so simple; and, when the result is good, the patient is left in so much better condition than after amputation that it is well to search for the cause of the dissatisfaction and try to find some way to make the operation successful. The trouble with trachelorrhaphy is that the site of the repair is apt to be so thin that it cannot possibly withstand another labor. A section through such a repaired cervix would show a cavity barely closed at the side. This poor result is brought about, I believe, by the faulty method of through-and-through stitching by which the side of the cervix is compressed to thinness, the ligature drawing the mucous membrane within the canal almost into apposition with the mucous membrane covering the cervix.

The usual repair is made by cutting through and removing the scar tissue at the site of the old laceration, denuding the anterior and posterior lips from the depths of the angle to the apex of each lip, and closing the wound with several through-and-through stitches. Some surgeons use catgut, but many find that, on account of the narrow apposition, the catgut will not hold, and hence use silkworm gut or silver wire. Such a repair looks well, but the poor result is evident if, for any reason, it should be decided to amputate the repaired cervix. While the denuded lips were from one-half to three-quarters of an inch wide, the repair is only from one-eighth to one-quarter of an inch (Fig. 1). In such a cervix, the eversion, to correct which the repair was made, quickly returns with its unhealthy discharges, and the next labor tears open the double layer of mucous membrane which alone has held.

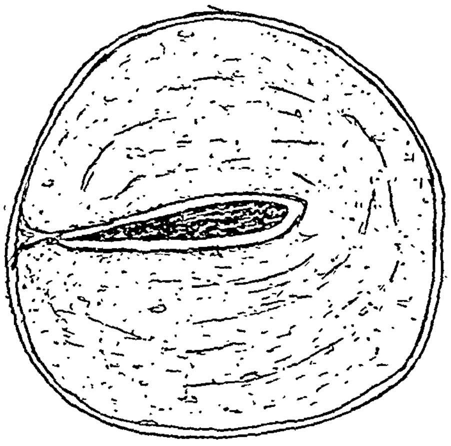

Fig. 1.—Amputated section of cervix, showing poor result of right unilateral repair.

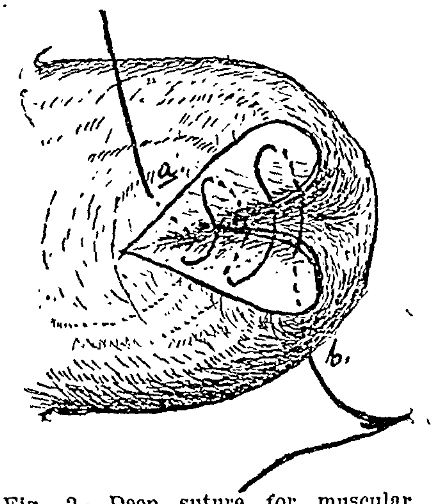

Fig. 2.—Deep suture for muscular layer starting at *a*.

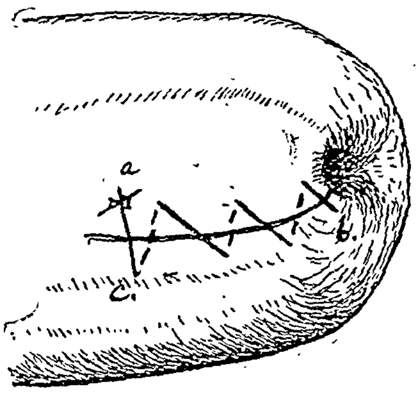

Fig. 3.—Superficial suture running back from *b* to *c*, and then tied with end *a*.

What steps can we take to make the repair a success? How can we bring together the broadly denuded muscular surfaces of the anterior and posterior lips without narrowing them? A repair of the cervix, I believe, should follow the method of layer suture so successfully used in closing the abdomen. I use a continuous suture in two layers. The needle is entered through the outside of the cervix near the angle of the wound (Fig. 2, a). This suture is carried very deeply back and forth into the muscular layer of the anterior and posterior lips, coming out at the front of the opposite lip (Fig. 2, b). Each stitch is pulled up as the operation proceeds, broadly approximating the depths of the wound. The suture goes to the edge of the mucous membrane of the cervical canal, passing through the superficial parts only at the points of beginning and ending. The superficial layers are then drawn together by running back the same continuous suture, coming out opposite the point of starting (Fig. 3), where the two ends are tied together. An amputated section of this cervix will show that it is equally thick in all parts and therefore properly repaired.

I use No. 1 chromic catgut, no tension on the stitches being required to hold the broad surfaces together. In case of bilateral laceration, I split and denude both sides, and then repair completely first one side and then the other.

In many cases it will be found that the cervix shows on one side a slight laceration without scar tissue, while on the other side there is a deep laceration causing hypertrophy, eversion and erosion. In these cases I do a unilateral repair, a wide wedge being removed from the bad side by which the hypertrophied parts are virtually amputated. While this will place the os uteri slightly on the side that has not needed repair, the operation is done with half the danger and in half the time required for other procedures, leaving perfect drainage with no possibility of stenosis. The cervix soon straightens itself and within a few months the os will be found at the apex. In many cases a deep wide unilateral operation is much better than a bilateral repair.

This method of layer suture on one or both sides is very simple and rapid and the result has been wonderfully satisfactory in my experience.

1000 East Genesee Street.

FORMALDEHYDE POISONING

HENRY F. HOYT, M.D.
EL PASO, TEX.

History.—A. K., a Japanese merchant, aged 24, had been given some medicine to take after meals—"a teaspoonful in a glass of water." He put the required amount into a glass and looked about for some water. He was in his place of business, into which he had just moved, and seeing on a table a gallon bottle labeled "Stafford water," a mineral water much used here, left by the former occupant of the premises, he filled the glass from the bottle and, as is often the case when taking medicine, did his best to gulp down the mixture as quickly as possible. He succeeded in swallowing over half of it before he discovered that something was wrong. He called for help, and as I was near I reached him in about a minute.

Treatment.—In that short time he was already in a state of shock with convulsions and only partly conscious. His assistants, all Japanese, were excited almost to frenzy, a condition which played such havoc with their limited English vocabulary that it was impossible to ascertain what had happened. I decided that I had to deal with a case of poisoning but of what nature or kind I had no idea. Seeing some salt on the table and a kettle of hot water on the stove I ordered them to make him swallow as much salt water as possible and to rub him vigorously at the same time, while I rapidly prepared a hypodermic of .0065 gm. of apomorphin. By the time I administered this they had succeeded in getting down about a pint of the solution. In a short time the emetic acted vigorously and continued to do so until we had refilled and emptied his stomach several times.

His tongue, mouth and throat were blistered but there was nothing in the odor of the stomach contents to give a clew as to the kind of poison he had taken. After he had rallied from the shock and the others had calmed down enough to talk coherently, I got the facts of the case. I removed the cork from the bottle of supposed "Stafford water," smelled the contents and my diagnosis was made. The "water" was a solution of formaldehyde left by the former tenant and was found to be the standard 40 per cent. mixture. From the patient's statement later he must have swallowed at least 100 c.c., possibly 120.

He developed a severe gastritis, with very sore mouth and throat, but made an uneventful recovery in about ten days.

This is the only case of formaldehyde poisoning I have ever seen and I find very little about it in the literature at my command. It is my opinion that, had the stomach not been full when he took the dose and had it not been emptied so promptly, the case would have terminated fatally.

A PECULIAR CASE OF MERCURIAL POISONING

BURNLEY LANKFORD, M.D.
NORFOLK, VA.

The following case is submitted because of the unusual method by which the mercury was introduced into the system:

History.—Mrs. — sent for me hurriedly one afternoon; she was seen first at 7:15. She was very nervous, crying, and said that she had awful pain in her head and that fearing that she was pregnant, because the week previous her menses had lasted two days instead of four, she had followed the advice of a woman of her acquaintance, and two hours before calling me had inserted as deep as possible into her vagina two mercury bichlorid tablets (gr. 7.3 each). She had had no idea that they would hurt her, but she was having much pain and thought she was swollen. An examination was at once made. Each labium was found to be at least an inch thick, very red, tense and shiny, having a brawny feel. With some difficulty, owing to the marked swelling, one finger was introduced, and the entire vagina and vaginal portion of the cervix were found to be in the same brawny state. No trace of the tablets was found. No one was present to assist, but realizing the value of time I made a strong soap solution (a gallon), emptied therein the contents of a box of cooking soda and gave her myself a copious vaginal douche; then, using the handle of a bent tablespoon as a Sims speculum, with the patient in knee-chest position, the whites of five eggs were put into the vagina. The swollen labia served to retain the albumin. The white of one egg will neutralize about four grains of bichlorid; therefore the albumin was present in sufficient quantity, though too late, to neutralize most of the bichlorid; it seems likely, however, that the subsequent failure of the vagina to slough was due to the albumin. A hypodermic injection of morphin was given to relieve the intense suffering. Before the morphin was given the patient was beginning to be nauseated, owing, it seemed to me, to the excretion of the bichlorid into the stomach, and so as fast as she would vomit she was made to drink a pint or so of water which in a few moments she would vomit again. The case was then turned over to her family physician, mine having been an emergency call, and I saw the patient no more for seven days.

Examination.—The change in her was pitiful. She had been an unusually pretty woman, but though I had known her for years, I could not have recognized her in the woman before me. The entire, face, neck and chest, for several inches below the clavicles, were tremendously swollen, the eyes practically closed, the tongue so swollen and protruding that the lips were forced far apart. The tongue and buccal mucous membrane were a grayish black, and were sloughing; the teeth were loose enough to have been spit out; the breath emitted a most horrible odor. There was not much flow of saliva at this time. The bowels were moving very frequently, small, bloody, mucopurulent stools; for the passage of each, the patient would jump out of bed, and had done so for a week. Her mind was fairly acute, though she could not articulate because of the swelling. She did not complain of pain in her abdomen, nor was she tender or tympanitic at any time while under my observation. Pulse at this time was 130, temperature 101.5 F.

Treatment.—She had been a very hard patient to manage, so the nurse said, and would not submit to any treatment nor would she try to swallow. She was given a very plain talk about the seriousness of her condition and after that she was more amenable. The following treatment was instituted: By means of a 6-ounce glass syringe with a long slender tip, the buccal cavity was irrigated every hour with the following solutions, in the order named: chlorate of potash, phenol 1 per cent., hydrogen dioxid 25 per cent. Much débris was removed each time; hot wet packs were given every four hours; vaginal irrigations with normal salt solution every twelve hours; rectal irrigations of normal salt solution every four hours. The undiluted white of egg and milk, which the patient was soon able to swallow fairly well, was given by mouth. Phenolphthalein in emulsion (8-grain doses) was given every eight hours.

Clinical Course.—Following this treatment the patient improved for the next twenty-four hours. The foul odor of the breath was much less noticed, the buccal mucous membrane became cleaner-looking, the swelling subsided somewhat, the temperature came down to normal, the pulse to 100, the skin reacted nicely, the bowel movements became more watery, and with less tenesmus, and there seemed to be more urine. The urine was never examined or measured because it was always passed with the stools, and the patient never would submit to the catheter; she would tell the nurse when she voided, however, and that (with the absence of uremic symptoms) was the only guide we had to the amount of urine that was being passed. There was no retention in the bladder. These hopeful symptoms continued for about forty-eight hours, the swelling continued to subside, the pulse retained its good quality; the patient became able to swallow well and drank much water. The morning of the tenth day, however, her condition changed; the pulse grew quick and soft, the skin would not sweat, the secretion of urine seemed to have stopped and she no longer attempted to get up for her bowel movements. Her mind grew cloudy and she began to be drowsy, though she had previously slept very little. After another consultation, she was given strychnin, spartein, digitalin, caffein and sodium benzoate, but nothing seemed to avail. The drowsiness deepened into sleep, the sleep into coma from which she could not be awakened. Death ensued on the eleventh day after the poison was introduced. There were no convulsions, and death seemed to be due to heart failure. No autopsy could be obtained.

I have not been able to find report of such a case. It is hoped that this case may serve as a warning to the woman who is always advising her neighbor how she can "bring herself around."

505 Mowbray Arch.

LINEAR AND SUBPERIOSTEAL FRACTURES OF THE LONG BONES IN CHILDREN

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Surgeon to the Boston Dispensary
BOSTON

The importance of this class of fractures is largely due to the fact that without a good *x*-ray picture they may remain unrecognized. Children are peculiarly liable to them. The necessity of a skiagraph in all cases of injury which in the past have been regarded as sprains and "bruises over the bone" is so well recognized as hardly to require comment. A skiagraph (two views) should be taken in all cases of injury to the extremities in children, even if a careful clinical examination is negative for fracture. The number of fractures of this class that remain unrecognized through failure to have an *x*-ray must be great, and especially so in the field of general practice, in which sometimes an *x*-ray may not be obtainable. Crepitus, abnormal mobility, and often swelling and ecchymosis may be absent in these cases of linear cracks and subperiosteal fractures in children. Without an *x*-ray a diagnosis can, however, be made in most cases from signs which are generally present, and the overlooking of which leads to error in diagnosis.

Careful examination will reveal very definite and valuable information. Localized tenderness along the seat of fracture is present, but, these fractures sometimes being such small affairs, longer and more careful search for them will have to be made than in ordinary fractures. The tenderness, when found, will always be *increased by the classic test of lateral traction between fixed points above and below the seat of fracture.* In long fissures or linear fractures, rotation will always be painful, and more so than any other movement. The relaxation of etherization will not aid our surgical sense in arriving at a diagnosis in the case of these often small and trivial solutions in the continuity of bones.

Case 1 (Clinic No. 10800).—A girl of 5½ years was seen at the Surgical Clinic, Boston Dispensary, April 27, 1909. The history was as follows: One day before she had fallen off a bed, injuring the right wrist. Examination showed no swelling or ecchymosis, very *little tenderness*, and some disability in using *arm*. Most of what little pain there was on examination the child referred to the wrist. The bony prominences were in perfect relation. There was no deformity, crepitus or abnormal mobility. An *x*-ray of the wrist was negative. Another examination showed slight, but definite tenderness over both bones of the forearm, and rotation of the radius was painful. Another *x*-ray was taken of the forearm and the picture showed a fracture of both bones, one transverse of the radius, and the other a slightly fissured linear fracture of the ulna. Treatment, antero-posterior and internal angular splints. Good functional and anatomic results.

Case 2.—A little girl of about 3 years was seen *after a fall* of a few feet from a chair onto the *right foot*. There was lameness and pain in the *right foot* and ankle. There was no pain or swelling of the leg. Examination of the ankle was negative. A fixation dressing was applied and the child kept off her feet. Pain and immediate disability followed attempts at weight bearing on the right foot. All symptoms, however, were referred to the ankle. A careful examination of the whole tibial region was now made. No swelling, crepitus, or abnormal mobility was found, but an area of considerable tenderness over the tibial crest, which either was not present or had been overlooked at the first examination. The *x*-ray showed a linear fracture of the tibial shaft, a mere "crack" in the bone. There was nothing found wrong with the ankle. Treatment, plaster-of-Paris fixation. Good result.

Case 3 (Clinic No. 8624).—A boy of 13 was seen at the surgical clinic, Boston Dispensary, April 3, 1908. The history was as *follows*: While playing ball at school that morning he had fallen, twisting his left ankle, the weight of the body coming on the ankle. Examination of the ankle was negative. There was no swelling or deformity of the leg, no crepitus or abnormal mobility, or displacement. The only sign present was an area of tenderness along the tibial crest, which was *increased on rotation*. The *x*-ray showed a linear fracture of *the tibia running down subperiosteally* to just above the ankle. Treatment, *plaster-of-Paris fixation, recumbency for a time*. Good anatomic and functional result.

Treatment of these cases should be of the simplest sort that is adequate to *maintain fixation* until union is solid. The result anatomically and functionally should in most cases be perfect.

A rough imitation of a subperiosteal linear fracture may be obtained by painting a small piece of wood—a wooden tongue-depressor answers well—with flexible collodion. After drying, a coating densely adherent to the wood is left, which represents periosteum. The wood is now held in a clamp and pressure exerted on its long axis. *After a certain amount of pressure a linear crack* appears in the wood, but the collodion envelope (periosteum) remains intact. *If* the pressure is increased the collodion envelope (periosteum) is torn through and we *have an ordinary closed fracture.*

CONCLUSION

Definite, localized, and well-marked points of tenderness may be found in most of these cases of linear cracks and subperiosteal fractures in children if long, careful search is made for them. Such findings, with increase of pain on firm pressure and rotation with all the classic signs of fracture absent, generally means a slight linear fracture. A diagnosis can in most cases be made clinically. An anesthetic will not help in the diagnosis of these fractures. An *x*-ray should be taken whenever possible. In all cases of injury in which fractures of this nature are suspected, the bony landmarks are in perfect position, and there is no displacement, *rough manipulation and forcible testing for crepitus are uncalled for and may do harm by increasing the fracture, which, as the position is perfect, we should avoid particularly.*

In these cases children often complain of pain and trouble at a distance from the real seat of fracture. The *x*-ray examination should not be confined to the part complained of, but should include the neighboring long bones as well.

903 Boylston Street.

PROCTOCLYSIS AND A NEW INSTRUMENT

EUEIDAS K. SCOTT, M.D.
BOISE, IDAHO.

Proctoclysis unquestionably offers to the physician and surgeon a valuable means of relieving human suffering and aiding the vital powers to resist and overcome disease.

Of the two methods—continuous flow and drop method—of administering salt solution by way of the bowel, the drop method offers the preferable technic to the physician, and more comfort to and more ready acceptance by the patient.

These objections to the continuous flow method present themselves:

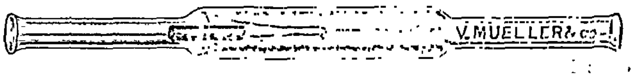
1. Many conditions of rectum, lower bowel and pelvis make pressure of a rectum full of fluid very uncomfortable to the patient and the fluid difficult to retain.

2. Many severe general conditions of patients cause a relaxed sphincter, and thus fluid escapes.

3. The regurgitation of intestinal contents into the apparatus means inconvenience and difficulty in thoroughly sterilizing it.
4. It requires a proper connection and tubing for escape of gases.

These objections are practically overcome by the drop method together with a small glass sight tube and the hard rubber regulator, as shown in the illustration.

The sight tube obviates the necessity of withdrawing the rectal end to note the working of the apparatus. The flow of the liquid can be observed readily without an expensive gauge. Gravity and varying the size and shape of the regulator will regulate the rate of flow from a constant stream to a few drops per minute. A pint and a half of fluid every two hours serves best for general conditions. That means about three drops in two seconds. By timing the rate of drops the amount per hour is noted at once. Back flow into the container is practically eliminated, as the bowel will absorb it at that rate, and there will be no excess unabsorbed.



Hard rubber regulator and glass sight tube for proctoclysis.

Gases can readily escape through the apparatus when the sight tube and regulator are used. The apparatus does not become contaminated with the contents of the bowel.

Patients have almost perfect ease and comfort with this method—a point of no trivial concern to the medical man. The results are more definite and uniform, as a constant, perfect working apparatus is assured and, combined with an irrigating thermometer, is undoubtedly a most valuable contrivance for proctoclysis.

417 Overland Building.

AN UNUSUAL PRODROMAL MANIFESTATION OF IDIOPATHIC EPILEPSY

ALFRED GORDON, M.D.
PHILADELPHIA

Aura preceding an epileptic discharge may be motor, sensory, psychic, or psychomotor. Among the various well-known psychic "warnings" of an oncoming seizure the one here described presents such rare features that its placing on record is warranted.

A boy of 12, suffering from essential epilepsy since the age of two and being affected at irregular intervals with attacks of grand mal and petit mal, began to develop an unusual aura preceding the major seizures. Two days before a fit occurs he becomes exceedingly restless, although he is habitually morose, quiet and of a pessimistic disposition. The restlessness is followed by a desire to embrace and kiss any one who enters the house.

He spends his time in ceaselessly throwing his arms around the neck of every person in the house, be it relative, stranger, or servant in the kitchen. The embrace is accompanied by rough kissing in which he repeats the act a great many times and ends with biting the kissed spot of the face. The kissing is only interrupted by eating and sleeping. But as soon as he is done eating or wakes up after a sleep he resumes his peculiar occupation. He does not hesitate in doing so while on the street, and for this reason he is kept strictly in the house until the attack of epilepsy has passed.

The act of kissing is sometimes replaced by the act of laughing. The laughter is then unusually loud and unusually long and, according to his mother, it lasts sometimes five minutes. No measure employed at that time to arrest the "enervating" act is of any avail. He must go on and not be interrupted. As soon as he is done laughing he resumes his act of embracing. Curiously enough, the laughing, embracing and kissing, in spite of being prolonged and almost without intervals, do not apparently exhaust the patient. At the time of his meals his restlessness ceases and at 7 o'clock in the evening he asks to be put to bed.

During the forty-eight hours of this unusual activity the boy realizes the situation and is well aware of his acts. He converses rationally, answers questions, but when asked to cease his actions, he claims that he makes efforts, but is hopelessly incapable to arrest them. He "must go on," "something forces" him to do so, he says. His mother also states that sometimes (not in each attack) the kissing is substituted by striking or slapping. He seizes every person in the house and strikes them several times in succession with his open hand over the back or else over the face. His little brothers or sisters are the usual victims of this performance.

It is also interesting to observe that during the time he is indulging in the peculiar propensities mentioned, his appetite is extremely great so that no amount of food can satisfy him, and he excretes an unusual quantity of urine with a remarkable frequency (almost every half hour).

The unusual psychomotor manifestations described above last forty hours, after which he suddenly falls unconscious and goes through all the phases of a genuine major attack of epilepsy, viz., tonic and clonic convulsions, frothing at the mouth, biting of the tongue. An attack is followed by a profound sleep. After he regains consciousness and the habitual mental hebetude disappears he is able to recall the peculiar prodromal phenomena. He feels much embarrassed for his singular behavior, for embracing and kissing so profusely strangers and relatives. He then becomes depressed for a period of five or six days.

The prodromal manifestations described made their first appearance only at the age of nine and they appear only before an epileptic seizure. The latter occur irregularly, but not more frequently than once in three or four months. The appearance of the peculiar phenomena which never fail before a fit—and especially their regularity—is an excellent warning for the patient's relatives so that they are able to take the necessary precautions to avoid accidents.

The interesting part of this observation lies in the manifestations of the unusual symptoms preceding an epileptic convulsion, *viz.,* in the exaltation of physical and mental functions, in the regularity of the prodromal manifestations and, finally, in the fact that the latter were accompanied apparently by a complete lucidity of mind, but by a complete inability to control them on the patient's part. The actions were automatic, uncontrollable, impulsive.

Can such actions be considered conscious? Although the patient was able to answer questions and, according to the mother, knew what he was doing, nevertheless the automatic acts could hardly be considered conscious. The automatic nature of the acts preclude voluntary efforts and therefore they are unconscious or subconscious.

Extreme restlessness with exaltation of all functions with apparent lucidity of mind are characteristic of the maniacal phase of manic-depressive insanity.

Was the condition in the present case an analogous occurrence?

Could the singular manifestations preceding the major attacks of epilepsy be considered as attacks of *petit mal?* I am inclined to accept the latter view.

1430 Pine Street.

THREE CASES OF INFECTION WITH THE DWARF TAPEWORM (HYMENOLEPIS NANA) IN CHILDREN

OSCAR M. SCHLOSS, M.D.
NEW YORK

During the past eighteen months I have encountered 20 cases of infection with the dwarf tapeworm in children, 14 of which have been reported in a previous paper.[1] Three of the six additional cases encountered present points of sufficient interest to warrant an additional report.

Since the paper of Stiles[2] in 1903, a number of cases of infection with *Hymenolepis nana* have been reported in this country. Stiles predicted that the dwarf tapeworm was going to prove a common American parasite, and from my experience it is one of the commonest intestinal worms in children.

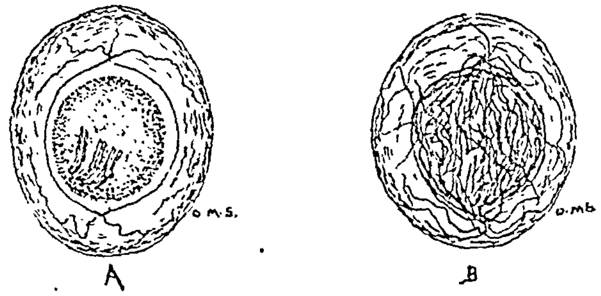


Fig. 1.—Ova of *Hymenolepis nana, greatly* enlarged; A, showing embryo; B, superficial focus showing filaments.

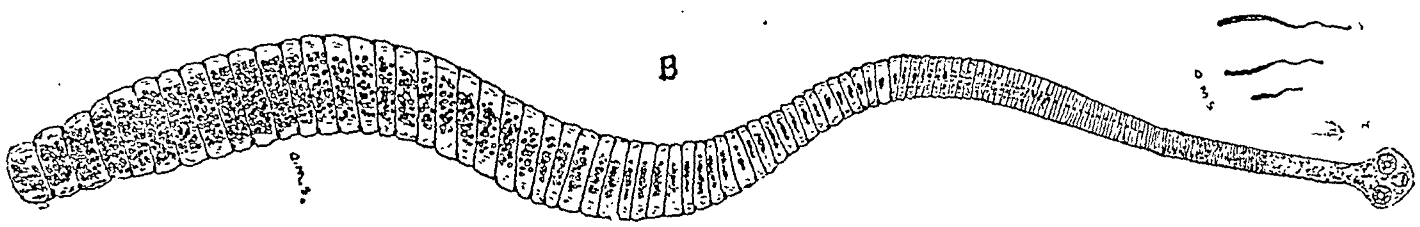


Fig. 2.—*Hymenolepis nana;* A, actual size; B, enlarged.

The dwarf tapeworm is the smallest cestode parasite of man, and great numbers of the worms are usually present in the infected cases. In the cases in which I have been able to make an estimate, the number of worms passed after treatment has ranged from 50 to over 2,000.

The presence of this parasite is indicated by the occurrence of the characteristic ova in the feces. The ova are usually colorless, though they may assume a slight brownish tint when they have stood in contact with the feces for some time. They have a slightly oval outline and are easily seen with the low power of the microscope (Leitz objective No. 3 or an equivalent). The eggs have two distinct membranes and within the inner is the embryo, which contains six booklets. The inner membrane has a slight projection at each pole, from which delicate filaments arise and ramify in the space between the membranes.

It is beyond the scope of this paper to attempt a description of the parasite, but the reader is referred to the text-books on helminthology or to the references given.[3]

CASE REPORTS

Case 1.—*Patient.*—P. G., male, aged 3½; born in New York City; Italian parentage. There was nothing important in the past history. The patient had not been entirely well for over a year. He had become pale and listless, though there was no apparent loss of weight. He was restless during sleep and frequently cried out during the night. The appetite was poor, the bowels constipated. The patient suffered from frequent attacks of abdominal pain which was referred to the epigastrium. The pain was of moderate severity and for several months two or three attacks had occurred each day.

Examination.—This showed a pale, fairly well-nourished child who did not appear acutely ill. The temperature, pulse and respirations were normal. The mucous membranes were pale and there was slight puffiness beneath the lower eyelids. The physical examination was otherwise negative. The feces contained numerous ova of *Hymenolepis nana.* The hemoglobin was 55 per cent. (Sahli hemometer) and the number of red blood cells was 3,900,000 per cubic mm. A differential count of 500 white cells gave the following percentages: Polynuclear cells 26.8 per cent., lymphocytes, 45.6 per cent., large mononuclear and transitional cells 16 per cent., eosinophil cells 10.9 per cent., basophil (mast) cells 0.2 per cent.

Treatment and Course of Disease.[4]—The usual treatment was given and numerous dwarf tapeworms were passed. Two thousand worms were counted but there were easily twice this number. Twenty days later the feces contained no ova. The child has shown great improvement. There has been no recurrence of the abdominal pain and sleep is normal. The patient is still (six weeks after treatment) rather pale.

Case 2.—*Patient.*—W. W., male, aged 5; was born in New York City of Irish parentage. The past history was negative. Two months before admission the patient began to lose weight and to be pale and irritable. He slept poorly and would frequently awake and cry out during the night. He had suffered from attacks of abdominal pain for about five weeks. The pain was referred to the epigastrium and would often occur several times a day. These symptoms remained the same until three weeks before admission when the patient had a general convulsion. All four extremities were affected; the convulsive attack lasted about three minutes and was followed by unconsciousness for about fifteen minutes. Similar convulsive attacks occurred two weeks and one week before admission.

Examination.—The child was moderately well nourished, with slightly pale skin and mucous membranes. With the exception of adenoid and tonsillar hypertrophy there were no abnormal physical signs. The hemoglobin was 70 per cent. (Tallquist scale) and a differential count of 500 leucocytes as follows: Polynuclear cells 45 per cent., lymphocytes 40.3 per cent., large mononuclear and transitional cells 7.6 per cent., eosinophils 7 per cent. A moderate number of the ova of *Hymenolepis nana* were found in the feces.

Treatment and Course of Disease.—The routine treatment was given. About 300 dwarf tapeworms were expelled and twenty days later no ova could be demonstrated in the feces. There has been no recurrence of the convulsions and the other symptoms have disappeared (one month after treatment). The mucous membranes are still slightly pale.

Case 3.—*Patient.*—C. G., male, aged 6; born in New York City. This patient is a brother of Patient 1. The symptoms in this case were almost identical with those in Case 1. The attacks of epigastric pain were less frequent and not so severe. The appetite was poor, the bowels constipated.

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[1] Archives of Pediatrics, February, 1910.

[2] Stiles: New York Med. Jour., 1903, lxviii, 877.

[3] For a complete description of the parasite and a review of the literature, see Ransom, Bull. 18, Hyg. Lab. U. S. P. H. and M.-H. S., 1904.

[4] The treatment used in these cases was that usually followed in the case of the larger tapeworms. Oleoresin of malefern was used and was given in three to five doses. One half to one dram is usually sufficient and has, in my experience, been without ill effects. A single treatment is not always sufficient. It is possible that the heads of some of the parasites are left in the intestine, or parasites in embryonic stages may be present, which are unaffected by the treatment.

Examination.—The hemoglobin was 60 per cent. (Sahli hemometer). Five hundred leucocytes were counted and were in the following percentages: Polynuclear cells 49.9 per cent., lymphocytes 22.5 per cent., large mononuclear and transitional cells 13.8 per cent., eosinophils 13 per cent., basophils 0.4 per cent.

Treatment and Course of Disease.—Three hundred dwarf tapeworms were expelled by treatment. The feces were examined twenty days after treatment and no ova were found. A second examination thirty-six days later was also negative. The symptoms were relieved by treatment and up to the present time have not recurred.

In many instances the dwarf tapeworm seems to be entirely harmless, judging from the absence of symptoms. In other cases symptoms are present which are usually mild, but in certain instances are rather severe. The three reported cases showed symptoms of unusual severity and give sufficient evidence that in a few cases at least the dwarf tapeworm may give rise to obscure gastro-intestinal or nervous disorders.

These cases were from the service of Dr. Eli Long in the pediatric clinic of the New York University and Bellevue Hospital Medical College. I desire to acknowledge my indebtedness for the privilege of making this report. I also wish to thank Miss Eleanor Ketcham for valuable assistance in carrying out the treatment and in following the cases.

54 West One Hundred and Fourth Street.

RUPTURE OF THE URINARY BLADDER OPERATED ON SEVENTY-SEVEN HOURS AFTER INJURY

JAMES R. JUDD, M.D.
HONOLULU, H. I.

With the literature at my disposal, I was under the impression that this was a very unusual case in respect to the interval of time between the injury and the laparotomy. In von Bergmann's surgery, vol. v, a case of Roses is recorded in which the patient was operated on 48 hours after the injury, and this is considered as probably the longest interval of time on record followed by a successful outcome. Quick,[1] however, reported an extraordinary case of 254 hours' interval. In this case the patient was able to void some urine, and the rupture "admitted the thumb rather tightly." The same article mentions Blumer's patient, operated on on the sixth day, and Alexander's case with 90 hours' interval. While the above reported cases render mine not unique, there is enough of interest to make it worth reporting.

History.—The patient, a native Hawaiian, aged 55, after a debauch fell off a veranda, a height of about six feet, and struck his abdomen. He immediately felt a sensation of something giving away inside of him and was unable to void any urine. He suffered considerable pain in the bladder region, and noticed that the abdomen began to swell. From Thursday, August 12, at 7 a. m., until Sunday, August 15, at 1 p. m., when he was brought to the hospital, he had passed no urine, the distention of the abdomen had increased, and respiration was becoming embarrassed.

Examination.—This showed a thin, sickly-looking adult, who lay on his back with his legs flexed. The pulse was 120 and feeble; respiration was 40 and labored, and temperature was 98. The abdomen was very much distended and the skin tense. There were no visible signs of injury. There was tenderness over the entire abdomen and the percussion note was dull. A catheter drew off a few drops of clear urine.

Operation.—Operation was performed at once. On opening the peritoneum, a jet of urine shot up to a height of about four feet. The amount of urine free in the abdominal cavity was estimated at six quarts. The posterior wall of the bladder showed a transverse rent with ragged edges, easily admitting four fingers. The peritoneum was everywhere injected but there was no evidence of peritonitis. The edges of the bladder rent were freshened and the wound sutured by a plain catgut through-and-through continuous suture including all the coats, followed by a Dupuytren silk suture for the peritoneal coat. The abdominal cavity was flushed out with salt solution and the parietal peritoneum sutured without drainage. The bladder was drained as in a suprapubic cystostomy. The abdominal wall was then closed, allowing exit for the tube.

Result.—The patient was placed in the Fowler position and did well for four days, when he began to show symptoms of delirium tremens and, when he was not being watched, he disconnected the tube and made his exit from the hospital. He was found after having walked about 200 yards and was put back to bed. The next day, in his delirium, he pulled the tube out of the wound, causing severe hemorrhage. A catheter was then placed in the urethra and the urine drained partly through the catheter and partly through the suprapubic wound. From that time on recovery was uneventful. The catheter was removed in five days and the patient began to pass urine successfully. There was at no time any evidence of cystitis. The man was out of bed in two weeks with a granulating wound which in two weeks more had entirely closed.

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[1] Ann. of Surg., January, 1907.

POLYCYTHEMIA DISAPPEARING AFTER REMOVAL OF THE APPENDIX

BAYARD HOLMES, M.D.
CHICAGO

Polycythemia, so often overlooked in routine examinations of the blood, must be considered a master symptom. It is not an anhydremia but a plethora, probably of toxic origin. It is directly due to an increased activity of the hematopoietic function of the bone-marrow as the histology shows at autopsy.[1] The fact that the polycythemia is so obvious (6,000,000 or more), is due to the effort of all the organs to dispose of the increased volume without raising the blood-pressure. Boycott and Douglas[2] demonstrated in 9 cases of polycythemia that the volume of blood was two or three times the normal, thus resembling chlorosis, ankylostomiasis and pernicious anemia. Thus the plethora of the ancients is restored to us in a new light.

The close relation between methemoglobinemia and polycythemia is so intimate as to make us associate them in searching for their etiology. In half of all the cases of sulphmethemoglobinemia and methemoglobinemia the patients have had a true polycythemia.[3]

The uncertain origin of polycythemia leads me to report the following case:

History.—E. J., aged 21, came to me with the diagnosis of appendicitis. He was a tall brunette and weighed 128 pounds. His father died at 57 of some abdominal disease, possibly cholangeitis. His two brothers are well and resemble him and their mother strongly, except in size. In that particular they resemble their father. While in school he became weak, dizzy and nervous, so that he could not rely on himself to do his work. He persisted for a few months, however, and then in 1908 went home. He was troubled with both diarrhea and constipation and was treated for mucous colitis. He made some improvement under the prescribed diet and the mucus disappeared but the attacks of general and abdominal distress continued. One of these spells was attended by so much tenderness over the region of the apendix that the patient's physician recommended the removal of the appendix.

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[1] Weber and Watson: Internat. Clinic, 1905, iv, 47.
[2] Boycott and Douglas: Jour. Path. and Bacteriol., 1909, xiii, 117.
[3] For bibliography see Quart. Jour. Med., 1909, ii, 128.

Examination.—The history was so much like a severe toxemia that I doubted the diagnosis for a time. The cerebral and neurasthenic symptoms, with abdominal discomfort, made me think of a long line of the diseases of uncertain origin. The examination of the blood which was made in my office, at Wesley Hospital and in the laboratory of the Northwestern University showed a high grade of polycythemia, 7,750,000 on the average. Many blood examinations were made by various observers and all agreed in a high red count without abnormality in white elements. The blood-pressure varied between 130 and 160 at various times. No spectroscopic examination of the blood was made as I did not at that time recognize the possibility of a methemoglobinemia. As I remember the patient now he did not show any cyanosis, or have any clubbing of the fingers. His spleen was not noticeably enlarged.

Operation.—In spite of my misgivings and with full understanding of the situation by the patient, his friends and his physician, I removed the appendix in July, 1909. There was evidence of a chronic appendicitis but unfortunately no examination of the colon or intestines was made through the small opening. There was no lymphadenitis such as we find in typhoid and no tuberculous peritonitis.

Postoperative History.—During the week in the hospital after the operation there was no change in the blood-count. On the patient's returning home he was advised to take the outdoor and forced feeding treatment, and a buttermilk and sauerkraut diet was especially urged. In September the blood was found entirely normal by Dr. Schooler of Pontiac. In February the patient called and seemed much improved in general appearance. He weighed 147 pounds. His blood was entirely normal, 4,800,000 reds, 7,500 leucocytes in normal proportions.

The possible relation between colon bacillus infection and polycythemia makes this observation, which seems to me unique, worthy of record.

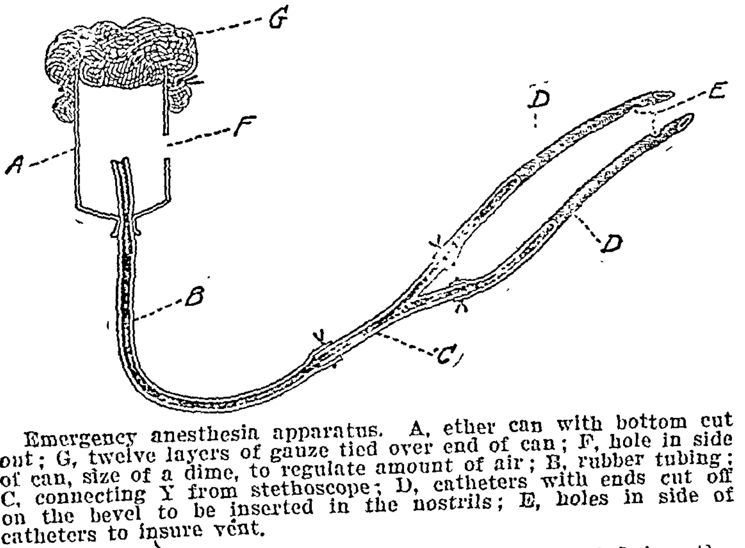
92 State Street.

AN EMERGENCY APPARATUS FOR ADMINISTERING AN ANESTHETIC

GEORGE A. CATHEY, M.D.

PORTLAND, ORE.

One morning a man was brought into the surgery of the Good Samaritan Hospital with the right side of his face badly lacerated, requiring an operation. The anesthetic was started, and while the patient was being scrubbed the surgeons realized the difficulty of doing the operation with the ordinary inhaler constantly in the way. Within five minutes I devised and had ready for operation the apparatus shown in the illustration.



Emergency anesthesia apparatus. A, ether can with bottom cut out; G, twelve layers of gauze tied over end of can; F, hole in side of can, size of a dime, to regulate amount of air; B, rubber tubing; C, connecting Y from stethoscope; D, catheters with ends cut off on the bevel to be inserted in the nostrils; E, holes in side of catheters to insure vent.

The tubes were introduced into the nostrils, the anesthetic was continued, and the operation finished without interference from administration of the anesthetic.

New and Nonofficial Remedies

Since the publication of the book "New and Nonofficial Remedies, 1910," the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections to aid in the revision of the matter before publication in the book are asked for.

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that so far as known it complies with the rules adopted by the Council.

W. A. PUCKNER, Secretary.

(*Continued from page 1142*)

THIOL.—Thiolum.—Thiol is a water soluble mixture of sulphurated and sulphonated petroleum oils.

Thiol is prepared by heating certain paraffin oils with 10 per cent. of sulphur, by which a partial addition of the sulphur takes place. *The thiol oil thus formed is then treated with sulphuric* acid for sulphonization. The excess of sulphuric acid is washed out by water and the sulphonated product neutralized by ammonia and the solution freed by dialysis from all inorganic salts. The dialyzed product evaporated to dryness contains about 12 per cent. of sulphur. For therapeutic purposes the evaporation is not carried to absolute dryness but the product is marketed either in the form of a syrupy liquid (Thiol Liquid, see below) or as a powder (Thiol Dry, see below).

Thiolum is a brown powder with a pleasant odor resembling Russia leather, having a somewhat bitter and slightly astringent taste. It swells up in water and finally dissolves. It is also soluble in alcohol and slightly soluble in ether.

Thiol should not markedly redden litmus paper.

Actions and Uses.—Thiol is said to have a drying, astringent, antiphlogistic, and disinfecting action. Taken internally it is said to favor digestion and defecation. It is said to be useful in skin diseases, especially in dermatitis, acne, eczema, erysipelas, erythema, furunculosis, herpes, pruritus, pityriasis, etc. It is also claimed to be useful in burns, in rheumatism and in certain diseases of women.

Dosage.—It may be applied locally in the form of liquid thiol in full strength or in solution with glycerin or water or in the form of ointment or a 2 per cent. solution of liquid thiol may be used as a spray. Internally it may be given in the form of dry thiol in the dose of 0.1 to 0.2 Gm. (1½ to 3 grains) three times a day. Dry thiol may be employed as a dusting powder, either alone or with 80 per cent. of starch or in the form of ointment or of paste.

Manufactured by J. D. Riedel Aktiengesellschaft, Berlin, Germany (Riedel & Co., New York). U. S. trademark 16,553.

Thiol Dry.—Thiolum Siccum.—Thiol Dry is a brown powder with properties corresponding to the description of thiol, containing from 8 to 9 per cent. of sulphur.

Actions, Usage and Dosage.—See Thiol.

Thiol Liquid.—Thiolum Liquidum.—Thiol liquid is a preparation of thiol containing about 1.8 to 2 per cent. of sulphur.

It is a dark brown neutral liquid of a not unpleasant smell resembling that of *Russian leather. It is easily* soluble in water and glycerin but only slightly soluble in ether.

Actions, Uses and Dosage.—See Thiol.

ARTICLES ACCEPTED FOR N. N. R. APPENDIX

The Maltine Company, Brooklyn, N. Y

Maltine[1] *with Cascara Sagrada.*—Each 100 Cc. is said to represent cascara sagrada (Rhamnus Purshiana) 12.5 Gm. (60 grains in a fluidounce) in a mixture containing maltine 96.115 per cent. and alcohol 3.885 per cent.

Maltine with Cod Liver Oil.—A liquid said to represent maltine, 56,115 per cent.; glycerin, 10 per cent.; cod liver oil, 30 per cent.; alcohol, 3.885 per cent.

Maltine with Creosote.—Each 100 Cc. is said to represent beechwood creosote, 0.83 Cc. (4 minims in a fluidounce) in a mixture containing maltine, 96.115 per cent., and alcohol, 3.885 *per cent.*

Maltine Ferrated.—Each 100 Cc. is said to represent iron pyrophosphate 1.65 Gm. (8 grains in a fluidounce) in a menstruum containing maltine, 96.115 per cent., and alcohol, 3.885 per cent.

Maltin [illegible] —Each 100 Cc. is said to contain calcium [illegible] (3 grains in a fluidounce), sodium hypophos[illegible] ns [illegible], and iron hypophosphite, 0.42 Gm. (2 grains in a [illegible] in a solution of ammonium citrate and to contain [illegible], [illegible] per cent., and alcohol, 3.885 per cent.

Maltine with Olive Oil and Hypophosphites.—A preparation said to consist of maltine, 65 per cent.; pure olive oil, 25 *per cent.*; glycerin, 10 per cent.; to which per 100 Cc. there is added calcium

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1. Maltine plain is already in N. N. R. Appendix, which see.

hypophosphite, 0.6 Gm. (3 grains per fluidounce); sodium hypophosphite, 0.6 Gm. (3 grains per fluidounce).

Maltine with Phosphate of Iron, Quinia and Strychnia.—Each 100 Cc. is said to represent iron pyrophosphate, 0.83 Gm. (4 grains in a fluidounce); quinine sulphate, 0.21 Gm. (1 grain in a fluidounce); strychnine (alkaloid), 0.0066 Gm. (2/75 grain in a fluidounce) dissolved in a solution of ammonium citrate and to contain maltine, 96.115 per cent., and alcohol, 3.885 per cent.

Maltine with Wine of Pepsin.—A liquid said to consist of maltine, 27.5 per cent.; wine of pepsin, 71.5 per cent.; and fluid extract of gentian, 1 per cent., the percentage of alcohol in the mixture being 18 per cent.

Malto-Yerbine.—A liquid said to contain in each 100 Cc. an extract of 6.6 Gm. (30 grains in a fluidounce) of eriodictyon (Yerba Santa), also flavoring composed of the essential oils of anise, cassia, coriander and caraway in a mixture containing maltine, 96.115 per cent. and alcohol, 3.885 per cent.

The extract of Yerba Santa employed in Malto-Yerbine is prepared as follows:

The leaves of Yerba Santa in coarse powder are boiled under pressure for six hours and inert matter separated by a filter press. The filtrate is concentrated with a certain quantity of maltine at a high temperature until the product has reached a density of 1.35 This extract is mixed in proper proportions with maltine of extra diastasic strength to make up for the diastasic strength lost through heat during the concentration of the drug with maltine.

(*To be continued*)

Therapeutics

TUBERCULOSIS

Any suggestion that even apparently tends to the successful treatment of this disease is worthy of general consideration, and the careful observations of Dr. John F. Russell, of New York, should not be allowed to pass by without comment. In the *Medical Record* of Nov. 27, 1909, and Dec. 18, 1909, he discusses his observations on the value of lime to the nutrition and its apparent ability to aid in Nature's healing of pulmonary tuberculous lesions.

He calls to mind that lime forms three-fourths of the total mineral salts of the body, and that it is found in all tissues and fluids, and that the most important lime salt is the insoluble phosphate. The chief lime-carrying food is milk, and, next to it, eggs, and it is certainly conceded that milk and eggs are most important in the diet of a tuberculous patient. It seems to be a chemical fact that the phosphate of lime is most ready for absorption and nutrition when it is in chemical union with a proteid. Whether a lack of lime is a predisposing cause of the successful growth of tubercle bacilli, as apparently believed by Russell, he seems to have shown that the more lime that is presented to these patients in a manner in which it can be absorbed and assimilated the more likely are they to improve and the more rapid is their, at least temporary, recovery. He has noticed, that when natural lime is presented in such a manner that patients will absorb it, that an effusion and symptoms of acute pleurisy occur over the region of lung that is diseased. The patients have increased temperature and pain, and all the signs of a plastic pleurisy. These symptoms last for a week or more, and, he says, as a rule the more marked the lung lesion the more marked the physical signs of pleurisy. After these acute symptoms subside and the slight effusion begins to organize, he finds that local improvement in the diseased lung can soon be determined. The time at which these symptoms of pleurisy develop is from the sixth to the sixteenth week after the treatment is begun.

Russell finds that the best method of administering the phosphate of lime, so that the patient may assimilate it, is by causing its combination with casein by acidifying milk with dilute hydrochloric acid. He says this cannot be well done by administering the acid after the patient has drunk milk, but a combination of egg and milk previously prepared makes, in his estimation, a successful lime food. "Two eggs are beaten, strained and mixed with enough milk to make a quart. Then 4 fluidrams (16 c.c.) of dilute hydrochloric acid are added to the mixture and stirred until thoroughly mixed. The mixture is then bottled and placed in an ice chest, and the patient drinks a pint in the morning and a pint in the evening. The size of the curds in the milk varies with the temperature of the milk at the time when the acid is added; the warmer the milk the thicker the curds, but they are always soft and easy to digest. The taste of this combination is not unpleasant."

Russell explains the action of the hydrochloric acid as, "first, to activate rennet zymogen; second, to activate pepsin zymogen; third, to stimulate the secretion of the pancreatic juice" by the promotion of the production of secretin from the intestinal glands, which hydrochloric acid has the power to do.

Russell insists that a patient is not successfully treated unless he gains weight up to the standard that was his previous normal. Russell does not strive to increase the patient's weight after he has attained his normal.

As noticed in other feverish processes, when there is fever in tuberculosis, probably the hydrochloric acid of the stomach is diminished in amount. Also, it is a fact that an increased amount of milk or increased amount of fats, as so generally ordered and prescribed in tuberculosis, will inhibit the normal output of hydrochloric acid. Both of these facts make it physiologically correct to administer dilute hydrochloric acid.

Russell does not presume that the increased amount of lime which he aims to have his patients assimilate will act as a poison to the tubercle bacillus, but he claims that when there is lime starvation or insufficient lime in the tissues that the cells do not properly function, and if lime in normal amount reaches the blood it will restore the normal protective function of the cells in producing a fibrosis at the point of irritation caused by the growth of the bacillus. His choice of the casein method of increasing the lime is because it has a peculiar affinity for lime salts, particularly the phosphate, and combines with them chemically. The investigations to which he refers also show that in the absence of rennet the chemical combination of lime and casein will not take place, and the rennet zymogen of the stomach will not act if there is not free acid present. Consequently, Russell has devised his method of increasing the absorption of lime on a scientific basis.

In further elaborating his theory that lime starvation may predispose to the growth of the tuberculous process, he instances the fact that pregnancy and lactation, with its drain on the mother's lime salts, and prolonged fever with the consequent diminished nutrition from the diminished amount or absence of normal hydrochloric acid in the stomach, all predispose to tuberculosis.

A tendency to repeated attacks of hemoptysis and other hemorrhages is now generally conceded to be due to lack of the proper amount of lime in the blood. Also, tuberculous processes that are healing require an extra amount of lime. All of these conditions, then, seem to show that an extra amount of lime is needed in tuberculosis.

Another interesting fact pointed out by Russell in this discussion of lime starvation is that cows are much more likely to be affected with tuberculosis than are bulls or calves, and, of course, it is the cow that is losing a large amount of lime with her milk; i. e., it would take more lime in a properly assimilable form to keep the lime content of her tissues normal than in the calf or the bull. Therefore, this dietetic suggestion of Russell's for tuberculous patients is worthy of practical application.

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[*For other information see second page following reading matter*]

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THE AMERICAN MEDICAL ASSOCIATION—ITS POLICIES AND ITS WORK

V. THE COUNCIL ON PHARMACY AND CHEMISTRY

In this series of editorials dealing with the work of the American Medical Association it is, in the nature of the case, impossible to prevent repetition. The work of the Association is so far-reaching and ramifies in so many directions that no one phase can be considered except in its relation to others. For example, it is impossible to discuss the work of the Council on Pharmacy and Chemistry without touching on the relation of the medical press to the proprietary question; neither is it feasible to deal with the work of the Association laboratory without dwelling to some extent on the "patent medicine" evil. We make no apology, therefore, for saying some things more than once. Reiteration of facts can do no harm; probably it is what is needed.

The organization of the Council on Pharmacy and Chemistry and the publication in The Journal of the work accomplished by the Council have made more enemies for the Association and its journal than all other activities of the Association combined. When it is realized that millions of capital were and are invested in the manufacture of fraudulent proprietaries and that a large portion of the medical press was and is deriving its existence directly or indirectly from the proprietary interests, it is not surprising that the most strenuous opposition arose when the Council undertook to tell the medical profession the truth about therapeutic frauds.

The cheap newspapers have consistently defended the "patent medicine" humbugs; for the same reasons the poorer class of medical journals have fought the work of the Council; not openly, except at first, for that would be impolitic, but by attacking the Association and by attempting to discredit its officers. It is a demonstrable fact that, SHOULD THOSE PREPARATIONS WHICH THE COUNCIL HAS SHOWN TO BE FRAUDS CEASE TO BE ADVERTISED, ONE-THIRD OF THE MEDICAL JOURNALS IN THE UNITED STATES WOULD GO OUT OF EXISTENCE.

It is unnecessary again to give in detail the reasons which brought the Council into being. The disgraceful condition into which drug therapy in the United States had sunk; the shameless impositions practiced on the public and the medical profession by proprietary frauds; the brazen way in which men without knowledge of medicine or pharmacy assumed to teach physicians how to treat disease; the subordination of the medical press to the nostrum interests—these were but some of the grosser abuses which had resulted from the unrestricted manufacture and sale of proprietary remedies. These evils the Association, through its Council on Pharmacy and Chemistry, hoped to correct; and these evils it has been, and still is, correcting with a success that is plain to all those who have taken even a superficial interest in the questions involved, and is even more clearly evidenced by the nature of the opposition it has aroused. In its work the Council has received the aid and approval of men—in both the United States and Europe—who rank among the highest in their professions, a cooperation that has meant much to the medical profession of this country.

Neither is it necessary to enlarge on the aims and objects of the Council; with these the medical profession, by this time, is thoroughly conversant. Moreover, this phase of the subject was exhaustively discussed by Professor Sollmann in his series of articles on "The Broader Aims of the Council." It is more important that physicians generally, and members of the organization especially, should be brought to a realization of what the Council on Pharmacy and Chemistry has actually done in the five years of its existence.

Proprietary products submitted to the Council are not hastily or superficially examined, but to each the most painstaking and careful consideration is given. Notwithstanding this, the Council has critically examined and thoroughly considered the claims made for more than one thousand products, of which over six hundred[1] have been accepted for inclusion in "New and Nonofficial Remedies," while nearly four hundred have been rejected. There are, of course, hundreds of nostrums which on their face are so plainly fraudulent that no intelligent physician could be misled by them and to which, since they stand self-condemned, the Council has not attempted to give more than a superficial examination. It is impossible for one not conversant with the details to realize the amount of work these figures represent. Nor does the examination of proprietary products which the manufacturers themselves have submitted comprise nearly all the labors of the Council. A large number of widely advertised preparations for which specious claims are made have been taken up on the Council's own initiative and their viciousness made plain to the medical profession.

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[1] It should be said that at the time the Council was organized probably not one-half of these six hundred preparations conformed with the Council's requirements. An honest desire on the part of the manufacturers to better the status of therapeutics caused them to modify their claims and made the acceptance of these products possible.

In addition to the vast amount of work that has been done on proprietary products, a number of drugs that are neither proprietary nor official have been considered by the Council. Such of these products as seem to have some therapeutic virtue have been described in "New and Nonofficial Remedies," while descriptive and critical reports have been published on those that are without proved value and whose deletion from the already overburdened materia medica would be desirable.

One phase of the work that at first was merely incidental to the general duties of the Council finally became of sufficient importance to warrant a special report, namely, that of curbing to some extent the misquoting of medical literature by proprietary manufacturers for their own ends. So extensive had this abuse become that even the more conservative manufacturers were guilty of grossly misrepresenting the views of medical writers. The Council took up one glaring instance and published an extensive report on the subject. The value of the preparation itself was not discussed, the only question being that of the garbling and misquoting of contemporary medical literature dealing with the preparation. That this report, together with the careful scrutiny to which the Council subjects the advertising matter of all preparations which it considers, has done much to cause manufacturers to be more conservative and truthful in praising their products and in quoting literature, is evident to any one who cares to compare the advertising "literature" of to-day with that issued five years ago.

Physicians, with the laity, have long held exaggerated views regarding the food-value of meat-extracts, though it has been proved, time and again, that, aside from possessing mildly stimulating properties, they are practically valueless. Moreover, while meat-*juices* have a distinct food value, many so-called meat-juices on the market are practically meat-extracts. The Council published the results of a most exhaustive chemical examination of some of the most widely advertised preparations for which great nutritive value was claimed and its practical absence was proved.

Within the past year the Council has devoted some time and work to the consideration of serums and vaccines, and through its initiative a symposium on these subjects was presented to the Section on Pharmacology, in which the best authorities in the United States were represented. From the conclusions reached by these authorities the Council prepared descriptions of the various products found on the American market.

In brief, then, it may be said that the Council has examined practically every proprietary article of any value now on the market, and that those which have not been accepted are unworthy of the physician's consideration.

It has shown up the fraud, misrepresentation and deceit connected with the exploitation of many of those proprietary articles which were a disgrace to pharmacy, a detriment to scientific medicine and a danger to the public.

It has—by insisting that products to be acceptable shall be advertised truthfully—done more to raise the commercial ethics of pharmaceutical manufacturers than any other agency—not even excepting the national Food and Drugs Act.

It has made plain, in a manner never before attempted, the strictly limited value of many largely advertised "meat-juices."

It has furnished the profession with information regarding the value of numerous unofficial, non-proprietary drugs and has thereby done much to dispose of the useless lumber of the overloaded materia medica.

It has thrown light on that valuable and ever widening branch of therapeutics, serum therapy, and, so far as our present knowledge will permit, has separated the wheat from the chaff.

It has, in fact, at all times tried to make plain to the medical profession the vast possibilities of rational, sane and scientific drug therapy as contrasted with the haphazard and vicious results of nostrum-prescribing. It has consistently, persistently and insistently told the truth about proprietaries—good, bad and indifferent—without fear or favor.

Therapeutics in the United States has progressed more in the last five years than it did in the previous fifty—and the Council is responsible for it. The American physician has a clearer conception of the possibilities and limitations of drugs to-day than he ever had before—and the Council is responsible for it. Purer and more reliable pharmaceuticals can be had now than ever before was possible—and the Council has been largely responsible for it. The reading pages of medical journals now published are freer from nostrum testimonials disguised as original articles than has been the case for a quarter of a century—and again the Council is responsible for it.

This work has not been accomplished without arousing the most active antagonism of those nostrum manufacturers whose products were exposed and of those medical journals whose existence depends on the advertising receipts from such manufacturers. When millions are invested in perpetuating a profitable fraud there can always be found those who will seek to justify the dishonesty—and the nostrum business is no exception. By open opposition, by innuendo and crimination, every effort has been made by the interests affected to disorganize the forces of therapeutic decency and to destroy the splendid work the Council is doing. Happily, however—and to the credit of the organized profession be it said—these efforts and this destructive criticism have failed, for the profession has decided that the work of the Council *is* worth while, that the advance made shall be maintained and that therapeutics shall not be allowed to lapse into its previous deplorable condition of utter subjection to the commercial spirit.

WILLIAM HENRY WELCH

The great dinner[1] in Baltimore April second, in honor of Dr. Welch, President-Elect of the American Medical Association, is unique among events of this kind because of the participation in it of so many representative leaders not only in medicine but also in the fields of general learning, of industry and commerce, and of politics. This outstanding feature of this remarkable event testifies better than almost anything else could to the general appreciation of the truly commanding position which Dr. Welch occupies and for many years has occupied in the medical and scientific activities of the country. How he reached such pre-eminence cannot be told fully at this time; a few imperfect and cursory touches only may be given of his remarkably useful career, the keynote of which is the unselfish and untiring devotion of a superb and finely trained intellect to the service of medicine. After his graduation in medicine (College of Physicians and Surgeons in New York, 1875), Dr. Welch turned his attention to pathology and for the next three years or so we find him at work in various German laboratories. Under the direction of that brilliant experimental pathologist Cohnheim, whose death at a comparatively early age seems such a great loss to science, he completed an important investigation on experimental pulmonary edema. He was present in Breslau when Koch, then unknown, came from Posen to show Cohnheim his work on anthrax and heard the latter's prophetic remark: "There is a great man of whom we shall hear much in the future!" A few years later, he took part in Koch's first course in bacteriology in Berlin. This must suffice to indicate the nature and extent of his earlier training.

He was professor of pathology in Bellevue Medical College in New York, when he was called to the newly founded Johns Hopkins University as professor of pathology and pathologist to the Johns Hopkins Hospital, being the first member of the faculty that was entrusted with the difficult task of establishing a complete medical school on the highest plane yet attempted in this country. The success of that attempt and its influence on our ideas of medical education in general are now matters of history. That the Johns Hopkins Medical School has been one of the leading medical schools of the world since its first inception, owing largely to the wise counsels, lofty ideals, and ability of Dr. Welch, its first dean, is not questioned by any one at all familiar with its development.

We may now consider briefly Dr. Welch in the threefold capacity of teacher, investigator, and adviser in affairs of medical and scientific nature. Dr. Welch is a great teacher. Always fully abreast with many lines of work by virtue of a faculty of easy acquisition, following closely the developments with keen and critical appreciation, endowed with an apparently phenomenal memory, he possesses an enviable power to impart knowledge with a facility that excludes all sense of its costing any effort whatever. Lucidity and ease of expression, close reasoning, the thoughts moving in orderly sequence, a judicial calmness and an all-pervading sanity—these are striking characteristics of his writing and speaking.

Primarily a pathological anatomist firmly rooted in cellular pathology, he has produced original work of the highest quality in pathologic anatomy, in experimental pathology, and in bacteriology, the details of which need not be given here. Many of his articles and contributions to text-books and systems are classical in their comprehensiveness and clearness; for example, the introduction to general pathology in Flint's work on practice, the article on thrombosis and embolism in Allbutt's system, the Huxley lecture on immunity, the papers on venous thrombosis in cardiac disease and on infections caused by the *B. aerogenes capsulatus* (discovered by Welch and Nuttall in 1892 and sometimes known as *B. welchii*).

Associated with profound scientific and scholarly attainments is the grace and charm of a personality that inspires affection and intellectual effort. Consequently a large amount of fine investigative work has been carried out by assistants and students working under the direction of the master. The pathologic laboratory of the Johns Hopkins Hospital very soon became the accepted center—the pathologic mecca—in the United States and Canada for investigation and training in pathology. Now former workers and assistants in that laboratory occupy a large number—too large to enumerate—of our most important pathologic posts, while many others have reached eminence in other branches of medical science as well as in practical medicine and surgery. Dr. Welch has had a larger part than any other person in training those who are now leading and about to take the lead in our medical teaching and investigation.

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[1] Reported in the News Department in this issue.

Many-sided, of clear vision, and in close touch with every aspect of medical science, Dr. Welch is rendering most important service in the capacity of adviser not only to individuals but also to institutions and to local and national governmental bodies. It is said that his advice led to the creation of the Yellow-Fever Commission of the U. S. Army, which, with the lamented Reed at its head, accomplished the epochal discovery of the rôle of the mosquito in the spread of yellow fever. The needed presence of a medical man on the Isthmian Canal Commission is due largely to the same influence. Occasionally instances become known illustrating that suggestions from Dr. Welch have borne rich fruit through the work of others, notably the demonstration of the filterable character of the yellow-fever virus. An enumeration of the more important positions occupied by Dr. Welch at the present time will emphasize better than anything else the value placed on his advice and co-operation: He is president of the board of directors of the Rockefeller Institute for Medical Research, the director of which, Dr. Flexner, his former assistant, is doing such splendid work; member of the board of the Carnegie Institution and chairman of the executive committee; president (since 1898) of the Maryland Board of Health; member of the Charter Revision Committee of Baltimore, and, last but not least, President-Elect of the American Medical Association. And here we take leave for the present of our representative in a uniquely wise significance, while at the zenith of a career of unparalleled usefulness, universally respected, honored as few are honored, beloved by all who know him.

THE AUTOMOBILE AND THE PHYSICIAN

The automobile is a part of the higher standard of living toward which all are striving, and in many occupations and conditions is as indispensable as the other necessities of to-day which only yesterday ceased to be luxuries. It is no longer a plaything of the rich; it is an efficient aid in practical progress—in the every-day work of the world—just as is any other piece of labor-saving machinery. Like other epoch-making inventions, it is a social and industrial force, but its novelty, its convenience, and the pleasure and relaxation it affords have absorbed general attention largely to the exclusion of its wider significance and importance, which, after all, is a not infrequent occurrence in the case of innovations of far-reaching importance. A future by no means remote will no doubt show that its influence in many directions has been marked. It would be interesting to speculate a little along this line.

Civilization, it has often been said, depends much on transportation. There are, of course, limitations to the services which may be rendered by steam and electric railways and by water transportation; so that even with their fullest development certain areas will be left without those means of rapid communication. The automobile is supplying this hiatus in transportation facilities. It brings the remote districts into quick communication with the centers of business, in touch with the markets, with the cities, the centers of education and culture. Already it has had a wide-spread influence on the roads of the country, calling attention forcibly to the value of good roads for everybody, whether auto-users or not. It will make possible a vast extension of the rural mail service, aiding the dissemination of knowledge. It will make possible the centralization of country schools, which has been found desirable, and which is already attempted with the slower means of transportation. In rural communities it will make possible residence in towns or villages, with the many advantages which closer social communion offers, thus overcoming the chief objections to rural life, without interfering with the successful cultivation of the soil under the scientific methods now being so rapidly developed. On the other hand it will enable the dweller on the farm, by means of this time-eliminating device, to keep in close touch with his neighbors and friends, or with the neighboring city, town and village, with the social and cultural advantages they afford. With this concentration of the rural population in towns and cities, or even without it, it is evident that this means of locomotion will give every one freer access than ever before to all the privileges of hospitals. More hospitals will no doubt be built in the smaller places; and the manifest advantages to the sick and the well need be no more than suggested here.

To the physician perhaps more than to any other member of the community the automobile is indispensable. Business can wait, if need be, but the work of the physician requires prompt attention always. His duties call him hither and yon, frequently at time-consuming distances. The automobile offers him a mode of conveyance which is always ready and which enables him to cover much ground at the least expense of time. Naturally it wins his approval, as is evident from the articles in this issue. These contributions from many readers express various opinions about the automobile, the kind of car to choose and the way to care for it, but with few exceptions they are favorable to its use by the physician.

It is interesting to compare the contributions of this year with those of previous issues. Some problems are passing away and new ones have taken their place. The high-wheel car seems to be less used. The pneumatic-tire problem is still with us, no substitute which is entirely satisfactory having been found. The pneumatic tire, however, is being perfected, and when properly used is giving somewhat less trouble than before.

Automobiles as a class are now made more reliable than those of two or three years ago. They are more available for the man who must be his own chauffeur and mechanician. The time seems not far away when it may almost cease to be necessary for a man to have some little mechanical ability in order to be a successful automobilist. Apparently there are a number of cars on the market which will give eminent satisfaction to the physician. It is clear, however, that the automobile cannot be operated and maintained for little or nothing. A man who uses it considerably for pleasure is apt to feel the need of an increase in his income. On the other hand, the man who uses his automobile largely for his practice will surely add to his income. It is the almost universal testimony that it enables a man to cover more ground and to see more patients and still to have more time for study and pleasure.

A part of the space given to the subject in this issue is taken up with an analysis of the replies to questions which we published asking for various facts in the experience of our automobile readers. We take this occasion to thank our contributors for what they have written, and to express the desire that the automobile may continue to be a source of profit and recreation to them.

THE NAMES OF THE AUTOMOBILES

As has been the custom, the names of the machines referred to are not given in the automobile articles, but are designated by reference numbers. A folder containing these numbers and the corresponding names and also containing a list of names and addresses of automobile manufacturers will be sent to any one who requests it and encloses a self-addressed, stamped envelope. Automobile contributors and those who sent in answers to the questions we printed need not ask for the key as a copy will be sent to each of them.

THE TEMPTATION TO "SCORCH"

There is probably no profession or occupation that has received more benefit from the advent of the automobile than has the medical profession. The time saved in going about enables the practitioner to widen the area of his activities, to see more patients, and, above all, to have more leisure for study, for reviewing his case histories and for recreation. The recognition of these advantages constitutes a constant temptation to reap more benefit by hurrying while on the road, and the habit of hurrying tends to foster that enjoyment of speed for its own sake which, when unrestrictedly indulged, has been aptly termed the "speed mania." All but the most timid have felt the fascination of speed, and frequent indulgence in this pleasure soon leads to a dissatisfaction with milder paces that it is difficult to disregard. The physician's machine, with its red cross, is almost everywhere somewhat privileged in the matter of speed, and rightly so, as the comfort of some sick person is frequently at stake, and life itself may depend on the promptness with which the physician responds to a call. While physicians as a rule do not abuse this privilege, there are some who take advantage of the leniency of the police and of public opinion to maintain a speed which is a danger to themselves and to others. Of the innumerable automobile accidents that occur no small proportion is due to excessive speed and careless driving. In a matter which so directly concerns the public safety the physician surely should set an example and avoid even the appearance of putting in jeopardy the life and limb of passers-by. The sentiment within the profession should be strong enough to discourage the immoderation of the few who are reckless. Having taken heed of the beam in our own eye, we can turn with better grace to the mote in the eye of the lay scorcher. When an abuse endangers the public, the medical profession, above all others, must be beyond reproach, or be condemned out of its own standards and precepts.

SANITATION IN PANAMA

The annual report of the Department of Sanitation of the Isthmian Canal Commission for the year 1909, just issued, shows that the remarkable record already established by this department has been fully maintained. Colonel Gorgas' letter of transmittal shows that the death-rate for the past six years has been as follows: 1904, 13.26; 1905, 25.86; 1906, 41.73; 1907, 28.74; 1908, 13.01; 1909, 10.64. The marked decrease since 1906 is in spite of the large increase in the number of employes; in 1906 there were 26,547 and in 1909, 47,167. The total number of deaths in 1909 were only a very few more than the total number in 1905, at which time, the entire force only numbered 16,512. Still more remarkable is the death-rate from disease among white employes, which only amounted to 3.88 per thousand for the year. The death-rate from special diseases is also remarkably low. During the year, there were only 13 deaths from typhoid, a ratio of 0.27 per thousand, while the death-rate from typhoid in the state of Pennsylvania for the same period was 5.03 per thousand. Only 8 deaths from dysentery occurred, not one of which was among white employes. The death-rate from pneumonia was about the same as that in New York City, while the total number of deaths from malaria for the year amounted to only 52. If the cities of Panama and Colon and the country in the Canal Zone between them is included, the total death-rate for all inhabitants for the entire year is 18.19, or 31 deaths less per thousand than in 1905, a saving of over 4,000 lives. The most remarkable of all, however, is the fact that not a single case of yellow fever, bubonic plague, or smallpox has occurred on the Isthmus during the past year. The work of the Sanitary Department of the Isthmian Canal Commission continues to be an object lesson of what can be accomplished by careful, patient, scientific work in freeing tropical and pest-ridden regions from diseases and in saving the lives not only of Europeans and Americans but of the natives as well.

Medical News

ALABAMA

Conference of Charities and Corrections.—At the annual meeting of the Alabama Conference of Charities and Corrections, held in Birmingham, March 22, the following physicians were elected to office: Dr. Thomas D. Parke, Birmingham, president; Dr. John B. Stagg, Pratt City, member of committee on membership. Among the interesting topics discussed was the "Assimilation of the Immigrant," on which a paper was read by Dr. Haickel A. Elkourie, which was discussed by President Abercrombie of the University of Alabama.

ARIZONA

Personal.—Dr. Ralph L. Alexander, Tempe, has been appointed local surgeon to the Maricopa and Phoenix and Phoenix and Eastern railways.——Dr. Clarence Guenter has been appointed assistant chief surgeon of the Randolph Lines with office in Tucson.

State Association Meeting.—The nineteenth annual session of the Arizona Medical Association will be held in Phoenix, April 20 and 21, under the presidency of Dr. Robert N. Looney, Prescott. The oration in medicine will be given by Dr. J. Wilson Shiels, San Francisco; the oration in surgery by Dr. Wesley W. Beckett, Los Angeles, and the oration on state medicine by Dr. James A. Egan, secretary of the State Board of Health, Springfield, Ill.

CALIFORNIA

Health Interests to Merge.—Representatives of leading public health associations of the state will meet in Sacramento April 18, to discuss the project of merging the health interests in a general association, to be known as the "Affiliated Health Associations of California."

Rules Against Vaccination.—In the case of the State Board of Health against the city of Watsonville, in which the board of education refused to enforce the new vaccination law, Judge Lucas F. Smith in the superior court of Santa Cruz, is said to have decided that vaccination law is unconstitutional and that it is class legislation in that it provides for vaccination of public school children and not private school children.

Medical Society Sues.—The Medical Society of the State of California has brought suit, based on the violation of the copyright law, in the circuit court asking an injunction against the Kaplan Medical Publishing Company. The defendant company published the official register for the society for the three previous years, and in October and January is said to have included the register in its own digest published quarterly.

Personal.—Dr. Charles R. Blake has been appointed health officer of Point Richmond, vice Dr. Hawley N. Barney.——Major Paul A. Adams, Los Angeles, surgeon of the First Brigade, N. G. Cal., has resigned and has gone to Honolulu as First Lieutenant, Medical Reserve Corps, U. S. A. Dr. Charles W. Decker, Los Angeles, has succeeded Major Adams.——Drs. Elmer R. Pascoe, J. S. Derrick, Charles T. Palmer and Chester L. Magee have been appointed assistant health officers of Los Angeles.——Dr. William E. Carter has been appointed assistant police surgeon of Los Angeles, to succeed Dr. Charles W. Bonynge, who has resigned and will take charge of the State Board of Health laboratory, Berkeley.——Dr. Philip A. Bill, North Beach, San Francisco, was assaulted and robbed near his home, March 7.——Dr. William T. Lum, Alameda, has been appointed a member of the board of education.

ILLINOIS

Chicago

Rush College Alumni.—At the twentieth annual reunion and dinner of the class of 1890 of Rush Medical College, Drs. E. Fletcher Ingals and Arthur D. Bevan delivered addresses. Dr. T. F. Wilcox was elected president; Dr. Henry D. Anderson, second vice-president; Dr. Emanuel Friend, Chicago, secretary, and Dr. Thomas H. Culhane, Rockford, necrologist.

Personal.—Dr. E. Fletcher Ingals has been elected an honorary member of the Vienna Laryngologic Society and corresponding member of the Royal Society of Physicians, Budapest.——Dr. Howard T. Ricketts, assistant professor of pathology in the University of Chicago, has resigned to accept a professorship of pathology in the University of Pennsylvania.——Dr. Hugh A. Cuthbertson and sister and Dr. James T. Campbell and mother sailed from Boston, April 2, for Vienna via the Mediterranean.

Anti-Spitting Crusade.—The first concerted movement by Chicago organizations to enforce the anti-spitting ordinance was started March 31, at a meeting attended by representatives of the police and health departments, men's and women's clubs, social settlement, United Charities and the Chicago Tuberculosis Institute.——The Chicago City Railway Company has announced that it will have new posters placed in all its cars warning against spitting, and that transfers will have similar matter printed on their backs.

KENTUCKY

New Hospital.—The Children's Free Hospital, Louisville, has been completed and was formally dedicated April 1.

Personal.—Dr. Edward Davenport, Hampton, was operated on in Paducah, March 18, for appendicitis.——The office and equipment of Dr. William C. Wilkerson, Clintonville, was destroyed by fire, March 17.

A Graphic Object Lesson.—The Louisville *Courier-Journal*, in its issue of March 24, published a series of illustrations to show that the Louisville City Hospital is crowded and in bad need of repair, as an object lesson to create public sentiment in favor of the bond issue of $1,000,000 for a new hospital, to be voted on in November.

Society Meetings.—The Paducah Medical and Surgical Society met recently and reelected for the third time the following officers: Dr. John G. Brooks, president; Dr. Oliver R. Kidd, vice-president; and Dr. James T. Reddick, secretary-treasurer.——At the annual meeting of Hardin County Medical Society, held in Elizabethtown, March 10, an insurance society was organized, to be known as the Hardin County Insurance Society, and the following officers were elected: Dr. D. C. McClure, president; Dr. John M. English, Elizabethtown, vice-president; and Dr. Charles T. Riggs, Upton, secretary.

MARYLAND

Personal.—Dr. R. C. Wells has been elected health officer of Hamstead.——Dr. J. McPherson Scott has been elected mayor of Hagerstown.

Optometry Bill Passes.—The optometry bill, which was opposed by the Medical and Chirurgical Faculty of Maryland, passed the senate April 1. Thirteen counties were exempted from operation, but Baltimore City was not included.

Baltimore

The Welch Dinner.—The banquet to Dr. William H. Welch is reported in General News and is also commented on editorially.

Entertainment for Children's Hospital.—The proceeds of the performance of "The Belle of New York" by the Paint and Powder Club, March 28, amounted to $2,850. This will go to the Children's Country Hospital School, located in the suburbs of Baltimore, which has accommodation for 25 patients.

Alumni Meeting.—At the annual meeting of the General Alumni Association of the University of Maryland, held in Lancaster, Pa., Dr. Eugene F. Cordell spoke on "The Duty of the Alumnus," Dr. Henry W. Fishel, Harrisburg, Pa., was elected president, and that city was chosen as the meeting place for 1911.

Personal.—Dr. Henry Barton Jacobs has been elected governor and Dr. B. Bernard Browne, historian, of the Society of Colonial Wars.——Dr. William D. Booker, clinical professor of pediatrics in Johns Hopkins Medical School, has asked to be relieved of his duties and has been made emeritus professor.——Drs. Louis V. Hamman and Paul W. Clough sailed for Europe April 2.——Dr. Harvey W. Cushing of Johns Hopkins Medical School, has under consideration a call to Washington University, St. Louis.

MISSOURI

To Enlarge Medical School.—The plans of President Brookings for the enlargement of the Medical Department of Washington University have been given an impetus by the voluntary offer of Adolphus Busch to join other citizens of St. Louis and the state in a movement to provide St. Louis with a medical college similar to Johns Hopkins University, Baltimore.

Alumni Association Meets.—The Barnes University Alumni Association, at its annual meeting, March 25, elected the following officers: President, Dr. Walter U. Kennedy; vice-presidents, Drs. Orril L. Suggett and Genevieve S. Beckham; secretary, Dr. Charles A. Vosburgh, and treasurer, Dr. Elbert J. Lee, Jr., all of St. Louis. The association decided to give a banquet during the meeting of the American Medical Association.

Personal.—Dr. Henry E. Miller, St. Louis, has returned from abroad.——Dr. Newton McVey, Kansas City, has been appointed state bacteriologist.——Dr. Abra C. Pettijohn, Brookfield, has been elected superintendent of State Hospital for the Insane, No. 2, St. Joseph.——Dr. William R. Strickland has been appointed postmaster of Rockport.——Dr. C. A. Gould has been appointed assistant city pathologist of St. Louis.

NORTH CAROLINA

Charter Granted Sanitarium.—A charter has been issued to the Greensboro Sanitarium with capital stock of $100,000.

Hookworm Work.—Dr. John A. Ferrall, Kenansville, has been designated by the North Carolina State Board of Health as special assistant secretary for the study and prevention of hookworm disease, and has removed to Raleigh.——Dr. Charles W. Stiles, United States Public Health and Marine-Hospital Service, has taken up his residence in Raleigh, and will make the city his official headquarters for the work of the Rockefeller Hookworm Commission, in its special investigation in the southern states.

Personal.—Dr. Edward J. Wood, Wilmington, has been elected president of the Medical Society of the State of North Carolina to fill the unexpired term of the late Dr. James A. Burroughs, Asheville.——Dr. John A. Williams, Greensboro, announces his retirement from general practice April 1. He will give his entire attention to surgery and consultation work.——Dr. Lucius B. Morse has moved his sanatorium from Chimney Rock to Hendersonville. The new building will accommodate 30 patients.

NEW YORK

Tuberculosis Preventorium Incorporated.—The Tuberculosis Preventorium, founded by Nathan Straus, which has for its object the prevention of tuberculosis among children, has received a certificate of incorporation and may operate in the states of New York and New Jersey.

Appoints Delegates.—Among the delegates appointed to represent the state at the National Conference of Charities and Corrections which will convene at St. Louis, May 19 to 26, are Drs. Albert W. Ferris, New York City, Charles F. Howard, Buffalo, and Hortense V. Bruce, Hudson.

Study of Hysteria.—The State Lunacy Commission announces that a systematic study of hysteria will be begun in the various state hospitals under the jurisdiction of the commission. This work is the result of the methods and studies introduced by Dr. Adolph Meyer, retiring director of the Pathological Institute.

Open-Air School.—Rochester is making a new effort to safeguard the physical welfare of its school children, and has established an open-air school, the outcome of the day camp established by the Rochester Public Health Association, through the efforts of Mrs. Porter Farley and Dr. Montgomery E. Leary. The first sessions of the school were held at the day camp, and these were continued until the Christmas holidays. Children from the entire city are admitted after examination by Dr. Joseph Roby, physician in charge, and carfare is furnished these children by the association.

Tuberculosis Talkettes.—The Rochester Public Health Association has decided to publish a series of forty leaflets on the various phases of the tuberculosis problem, which will be distributed to every health association in the country. The first "talkette" will be on "Consumption; A Brief History of the Disease," by Dr. Montgomery E. Leary, supervising director of the Public Health Association. Other talkettes to follow at short tintervals are on "Consumption; What it is and Why;" "Inhaling the Germ;" "Systems that Resist the Germ;" "Exploded Theory of Heredity;" "Carelessness;" "Fly, First Assistant to Death;" "Destruction of Tuberculous Expectoration;" "Destruction of Expectoration with Acids;" "Safeguarding the Public;" and "Disinfecting the Sick Room."

New York City

Learning How to Fight Tuberculosis.—A committee of seven appointed by the City Council of Portland, Me., has been visiting this city in order to learn how New York is fighting tuberculosis. The Health Commissioner spent a day showing them the methods employed by the Health Department and the city hospitals.

Precaution for a Safer Fourth of July.—Fire Commissioner Waldo, pursuant to an order from Mayor Gaynor, has issued the following notice, which should prevent the large number of accidents and cases of tetanus that have occurred in past years: "Notice is hereby given to all concerned that the Fire Commissioner hereafter will not issue any permit for the retailing of fireworks, Chinese crackers, rockets, blue lights, Roman candles, colored pots, lance wheels and other works of brilliant colored fire."

Boiled Milk Recommended.—At the direction of Health Commissioner Lederle an exhaustive examination of New York's milk supply has been made which has disclosed the fact that several epidemics of typhoid fever are directly traceable to infected milk. One epidemic was traced to a milk handler who was a typhoid patient forty-six years ago and during all the intervening years has been a distributor of typhoid bacilli. The work has been carried on under the direction of Dr. Herman M. Biggs, and on the presentation of his report to the Board of Health the three members, Commissioner Lederle, Health Officer Doty and Police Commissioner Baker adopted a resolution recommending that milk used for drinking purposes should be either pasteurized or boiled. It was also stated that it seemed probable that a certain percentage of the cases of diphtheria and scarlet fever occurring in New York City result from milk infection.

PENNSYLVANIA

Philadelphia

Personal.—Dr. Alexander C. Abbott has been selected as delegate to the International Congress on Hygiene and Medicine which meets in Buenos Aires next month.——Dr. Charles H. Frazier, clinical professor of surgery at the University of Pennsylvania, was operated on for appendicitis, March 30.——Dr. Almer H. Tomlin, who was operated on for appendicitis at the German Hospital, March 30, is reported to be improving rapidly.——Dr. M. F. Shaughnessy sailed for Europe, March 30.

Insurance Company's Life-Saving Movement.—The Metropolitan Life Insurance Company has made arrangements with the Visiting Nurse Society of this city to carry on the company's scheme of visiting sick policyholders in their homes and giving them all possible aid to tide them over their illness. The movement is not philanthropic, but a purely business arrangement. The policy of the company is to cooperate with the attending physicians, and the nurses' business will be to carry out the doctor's orders, and prevent the disastrous consequence of ignorance and neglect in the sick room. The free nursing service will be extended to the rich, poor and middle classes, irrespective of the amount of insurance they carry and of creed, nationality and color. It includes not only attention during the day, but will provide a nurse at night if the patient is critically ill.

Old-Home Week at the University.—Old-Home Week of the Medical School of the University of Pennsylvania was inaugurated, March 28, with clinics and a luncheon at the University Hospital. In the evening several hundred physicians attended the smoker of the Philadelphia Alumni Society of the Medical Department. Vice Provost Edgar Smith gave an illustrated lecture on the progress of the university since its founding. Following the lecture an appeal was made by Dr. Swithin Chandler to start a fund to erect a monument to Dr. John Morgan, the first dean, over his grave in St. Peter's Church, Philadelphia. The following officers of the Philadelphia Alumni Association were elected: President, Dr. George C. Stout; honorary vice-president, Provost C. C. Harrison; vice-presidents, Drs. J. Gurney Taylor, Lewis H. Adler, Jr., and Howard A. Sutton; secretaries, Drs. B. Franklin Stahl and Herbert S. Wray; treasurer, Dr. Herbert B. Carpenter; executive committee, Drs. Luther C. Peter, Charles A. E. Codman, Clarence P. Franklin, Stephen E. Tracy and Charles J. Hoban. On March 29 the centenary of the foundation of the chair of obstetrics was commemorated with exercises at the College of Physicians. This included an address by Dr. Barton C. Hirst, on Richard Penrose and biographies of Professors Chapman and Jackson, to whom tablets were unveiled Wednesday, were read by Drs. S. Weir Mitchell and James Tyson. On Wednesday the bronze tablets of Chapman and Jackson were unveiled in the Medical Building by Dr. R. Tait McKenzie. Dean Allan J. Smith of the medical department delivered the address of acceptance.——The banquet of the medical alumni was held Wednesday evening at which nearly 300 were present. At the close of the banquet, Provost C. C. Harrison made an address, the chief interest of which was the announcement of faculty changes and new appointments. These were detailed in THE JOURNAL last week, page 1145. The following officers of the Society of the Alumni of the Medical Department were elected: President, Dr. Samuel S. Stryker, '66, Philadelphia; vice-president, Drs. James B. Walker, '72, Philadelphia; George A. Piersol, '77, Philadelphia; Charles W. Burr, '86, Philadelphia; George W. Guthrie, '76, Wilkesbarre; Edward Jackson, '78, Denver; William A. Edwards, '81, Los Angeles;

Thomas M. T. McKennon, '82, Pittsburg; historian, Dr. Roland G. Curtin, '66, Philadelphia, and secretary and treasurer, Dr. Edward A. Shumway, '94, Philadelphia.——The members of the class of 1890 of the medical department, who returned for "Home Week," celebrated the twentieth anniversary of their graduation at a banquet, March 31, at which 18 members of the class were present. The class of 1884 held an informal dinner the same evening over which Dr. George E. de Schweinitz presided.

OHIO

Greene Guest of Honor.—Three hundred members of the Montgomery County Medical Association tendered a banquet to Dr. Duff W. Greene, Dayton, March 4, to celebrate his homecoming after an extended tour of professional research in India.

Personal.—Dr. Daniel W. Reddin, North Baltimore, was operated on for appendicitis, March 21.——Dr. Edgar B. Foltz, Akron, sailed for Europe, April 2.——Dr. Jerry M. Hyde has been appointed health officer of Nelsonville.——Dr. Ezra Burnett, Delphos, was thrown from his buggy in a runaway accident, March 9, and sustained painful injuries.——Dr. Frank W. Rodgers, Findlay, is reported to be seriously ill with paralysis.——Dr. Mark Millikin, Hamilton, has been appointed local surgeon for the Pan Handle System.——Dr. William D. Cunningham has been appointed health officer of Girard.

RHODE ISLAND

Personal.—Dr. Charles F. Peckham, Providence, has been elected surgeon-general of the Rhode Island National Guard, vice Dr. George H. Kenyon, Providence, resigned.——Dr. Frederick T. Rogers, Providence, was operated on for appendicitis at Parade St. Sanitarium, February 17.

Society Election.—Providence Medical Society, at its annual meeting March 7, elected the following officers: President, Dr. Jacob C. Rutherford; vice-president, Dr. Franklin P. Capron; secretary, Dr. Frank M. Adams; treasurer, Dr. Winthrop A. Risk: councilor, Dr. Joseph H. Akers, and delegates to the state medical society, Drs. Herman C. Pitts, George S. Mathews, Frederick G. Phillips, Henry W. Burnett, Charles F. Deacon, George T. Spicer, Carl R. Doten, George H. Crooker, Clarence H. Gardner and Franklin P. Capron.

SOUTH CAROLINA

Health Officers Elected.—At the annual meeting of the Charleston Board of Health, Dr. John L. Dawson was reelected vice-chairman, and Dr. J. Mercier Green, secretary.——Dr. Edwin P. Derrick has been elected a member of the board of health of Lexington.——At the reorganization of the board of health of Anderson, Dr. Joseph O. Wilhite was elected chairman and Dr. J. Bennett Townsend, secretary.

TENNESSEE

Personal.—Dr. Edwin B. Anderson has been elected chief of the summer medical staff of Erlanger Hospital, Chattanooga, vice Dr. Henry Berlin, and Dr. J. Jefferson Gee has been elected secretary of the staff.——Dr. George E. Hatcher has been appointed assistant superintendent of the Central Hospital for the Insane, Nashville.

Hospital News.—Dr. George W. Hubbard, dean of Meharry Medical College, Nashville, announces that the work on the new George W. Hubbard Hospital will soon be commenced. The building will have cost $50,000 when completed.——At a meeting of the Chattanooga Tuberculosis Sanatorium Association, March 9, an eighty-acre tract of land near Tyners, donated by the City Water Company, was accepted, and a committee was appointed to raise funds for improvement of the site and the erection of buildings thereon.

TEXAS

District Society to Meet.—The Northwest Texas Medical Association will hold its annual meeting in Wichita Falls, April 12 and 13, under the presidency of Dr. Wade H. Walker, Wichita Falls.

Medical Society Organized.—At a meeting of the local physicians, March 24, the Nacogdoches Medical Society was organized, with Dr. Joel H. Barham, president; Dr. John H. Reagan, vice-president, and Dr. Robert P. Lockey, secretary-treasurer.

Quarantine Station Completed.—The state health officer, Dr. William M. Brumby, reports that the Galveston Quarantine Station is now completed. It now includes a modern hospital, wharves and slips, and is now prepared to cope with any emergency that might arise.

Personal.—Dr. Morris Boerner has resigned as a member of the staff of assistant physicians of the State Lunatic Asylum, Austin.——Dr. H. Powell Luckett has resigned as city physician of Bastrop.——Dr. Thomas J. Milner, Greenville, has been reelected health officer of Hunt county.——Drs. Thomas W. Moore and Otto Ehlinger, LaGrange, were painfully injured in a runaway accident, February 12.——Dr. Paul Renger, health officer of Hallettsville, was operated on recently in Cuero for appendicitis.——Dr. L. C. Logue, Columbus, has been appointed a member of the staff of assistant physicians of the State Lunatic Asylum, Austin.

VIRGINIA

Railway Surgeons Coming.—The Association of Southern Railway Surgeons will assemble in Richmond May 24, for its fifteenth annual meeting, under the presidency of Dr. Charles H. Starkel, Belleville, Ill.

Dentists Must Have Medical Education.—Last week the state legislature passed a law requiring that all dentists entering the state to practice after Jan. 1, 1914, shall have a medical education.

Legislative Appropriation.—The House of Delegates has appropriated $40,000 for the State Board of Health and $40,000 for buildings and improvements at the Catawba Sanatorium for Tuberculosis for the first year; for the second year, $20,000 is appropriated for the board and $27,000 for maintenance of the sanatorium.

Indictment Quashed.—An indictment recently returned by the Norfolk grand jury against Drs. J. J. McKanna, Jr., and Charles Lincoln, charged with practicing medicine without a license, was quashed in the corporation court, February 14, on the ground that the charges were not specific.——Dr. McKanna has, it is said, agreed to leave the state.

Personal.—Dr. Guy Hinsdale, Hot Springs, has returned from a visit to Europe.——Dr. Powhatan S. Schenck has been reappointed state quarantine officer at Norfolk.——Dr. Carlisle L. Nottingham, Cape Charles, has been appointed a member of the board of health of Northampton county, and surgeon-in-chief of the New York, Philadelphia and Norfolk Railroad.——Dr. Garland P. Moore and family, Cape Charles, have started for Japan.——Dr. Joseph N. Barney, Jr., Fredericksburg, has been appointed a member of the State Medical Board for the first congressional district.

WISCONSIN

New Tuberculosis Dispensary.—A free dispensary for tuberculosis was opened March 15, by the Society for the Care of the Sick, in Trinity Hospital Building, Ninth and Wells street, Milwaukee.

Sanatorium for Racine.—The city council has authorized the Racine Branch of the Wisconsin Antituberculosis Association to build and equip two cottages for the care of advanced cases of tuberculosis on the grounds of the present isolation hospital.

Personal.—Dr. Arnold H. Drexel, Milwaukee, has started for Vienna.——Dr. Hasse A. Meilike, Clintonville, has been reappointed a member of the State Board of Health and Vital Statistics.——Dr. William J. Allen, Beloit, has been appointed assistant health officer.——Dr. George N. Hidershide, Arcadia, who is under treatment at Winona Hospital, is reported as progressing favorably toward recovery.——Dr. Charles D. Packard, Rhinelander, who has been seriously ill with inflammatory rheumatism, is convalescent.——Dr. J. A. Drury, Peppin, has started for Europe.

GENERAL NEWS AND COMMENT

Dinner to Surgeon-General of Navy.—Surgeon-General Charles F. Stokes, U. S. Navy, was the guest of honor on March 29, at a dinner at the University Club, Philadelphia, tendered by Dr. Corbin J. Decker, U. S. Navy, at which a number of representative physicans were guests.

Canal Zone Physicians Meet.—The fourth annual meeting of the Canal Zone Medical Association was held at the Ancon Hospital, March 9. Dr. James C. Perry, Ancon, was elected president; Dr. Lloyd Noland, Cristobal, vice-president; and Dr. John W. Ross, Jr., Ancon, secretary-treasurer.

Transactions of International Congress Ready.—The general secretary of the Sixteenth International Medical Congress (Budapest) writes that the general transactions will be distributed to the members of the congress during April. According to the congress regulations, each member is to receive a copy of the general report as well as that of the section in which he was inscribed. They are to be accompanied by a work on "Protection of Child-Life in Hungary," presented to each participant in the congress by the Hungarian minister of the interior.

THE WELCH DINNER

Grand and Impressive Banquet Given to Prof. William H. Welch in Baltimore

The dinner to Prof. William H. Welch, held in honor of his election as President of the American Medical Association, at the Belvidere Hotel, Baltimore, April 2, was the most remarkable banquet ever held in Baltimore. It was attended by about four hundred and fifty men and women, and no one left until it was all over, at about 1 o'clock in the morning. There were many distinguished guests present, some coming from a considerable distance. Letters and telegrams were read from many others, including some warm friends in England and Germany.

The designated reason for the gathering was to congratulate Dr. Welch on his being President-Elect of the American Medical Association, but the occasion provided a delightful opportunity to Dr. Welch's many friends and admirers of expressing their love and esteem, and honoring him for his attainments as a scientist and a citizen.

Dr. Welch passed to the dining-room through a double line of his applauding friends, and the ovation which he received was a remarkable one, such as is rarely given to a private citizen. The dinner itself was most elaborate and gave abundant evidence of the extraordinary pains which had been taken over every detail. The beautifully decorated hall was adorned with spring flowers, each table in a different manner, and an orchestra provided music.

Dr. William S. Thayer was Toastmaster and he presided in a most happy manner, introducing each speaker with most appropriate words. We give below his introductory speech in full. The addresses were by Dr. S. Weir Mitchell who also read a poem which is printed below and which was received with great delight, Dr. William T. Councilman of Harvard University, Dr. J. A. Witherspoon of Nashville, Tenn., Dr. S. Alexander of New York, Dr. Henry Barton Jacobs, Maj.-Gen. Leonard Wood, and Dr. Abraham Jacobi.

Dr. Jacobi spoke in characteristic vein and we are fortunate in being able to present his remarks in full below. Professor Councilman was decidedly facetious, declaring that "no man should receive credit for what he is," and assumed for himself and his associates the responsibility for having made Dr. Welch the great man he is. His remarks were most interesting and decidedly amusing. He paid a high tribute to Professor Welch, declaring that "no man has ever heard him say evil of his fellows." He declared Dr. Welch to be "incorruptible," "unsalable," and a man whom his associates had learned to love.

Dr. Witherspoon spoke in his usual eloquent vein and named Dr. Welch the "father of scientific progressive medicine" and "the smartest man in the world."

Dr. Henry Barton Jacobs was announced as the man who proposed the dinner and was applauded with the hearty appreciation of the assemblage for his part in such a successful and important function. He stated that the medallion which was such a prominent feature of the occasion was suggested as the most fitting memorial to Dr. Welch by Dr. Rupert Norton of Johns Hopkins Hospital. All the lights were turned off except one and that one shone brightly on the medallion amid rousing cheers. The medallion is of gold and contains the words: "From His Friends." Large bronze copies have been made for presentation to the Johns Hopkins Hospital and to the Medical and Chirurgical Faculty of Maryland.

We are printing below a number of the speeches and it is a matter of regret that we cannot give in full the others, which were not delivered from manuscript. Keyed up to the high pitch of enthusiasm which the occasion demanded, every speech was a gem and combined to make the occasion one never to be forgotten by those so fortunate as to be present.

INTRODUCTORY ADDRESS BY THE TOASTMASTER, DR. THAYER

Colleagues and Friends:—At the outset, in the name of Maryland and Baltimore, let me greet you who have come from distant parts to join in doing honor to the friend to whom every one of us owes a personal debt of gratitude and affection. And then for us all, and for the many others who cannot be here, let me tell him what a happy moment this is for us.

Last June, as one of the friends who is not with us to-night has said, the American Medical Association elected its foremost member to the presidency. But 'twas not without difficulty, for his modesty had led him to hide for some time behind the armour of protecting technicalities. And it may as well be confessed that his presence here to-night was obtained only by strategy.

When, last fall, through the generous initiative of Ellis and Jacobs, there was called together a small group of Welch's friends and students who felt that they must have some opportunity to express that which filled their hearts, it fell to me to tell Dr. Welch our plans. Our modest suggestion was met by a categorical refusal. The invitation was finally accepted only on condition that the demonstration should be essentially a "home affair," and that the gathering should be as small as possible.

Dr. Welch, we have kept our word. This is the smallest gathering which could begin to express what we would say to you.

And now that we have our friend prepared, as it were, on the table, the orthodox procedure would be to enter on a minute and critical and objective dissection—to lay bare coldly his accumulated treasure. But alas, one must confess the impossibility of objectivity in such a case. And so, to use the formula of the wise man who has insisted so amusingly on the necessary subjectivity of all utterances, I shall now proceed to say a few words about myself, *apropos* of Dr. Welch!

I well remember the first time that I ever heard Welch's name; it was nearly twenty-three years ago. An honored instructor had advised me to buy a certain book on the practice of medicine, because, in addition to the many excellencies of previous editions, this last had been revised, and in many parts largely rewritten by a certain Dr. Welch, whom he regarded as the ablest physician in the country. Three years later, as I was on my way to take up my work in Baltimore, another instructor told me that he felt that the greatest privilege of life at the Johns Hopkins Hospital would be the proximity to Dr. Welch. He well remembered an involved discussion at a medical meeting at the end of which a young man of modest appearance arose and in a few, wise, simple, direct words cleared up the whole matter. He had been immensely impressed and had since regarded him as one of the most remarkable and ablest men in this country. How well to-day, do we all realize the justice of this observation.

At this time, twenty years ago, his influence which had been felt so deeply in New York, had already been quietly exercised in the selection of the original staff of the Johns Hopkins Hospital. Already, for five years, he had been at work in the laboratory, surrounded by a group of students whose names are all well known to-day. From that little laboratory, cramped and crowded, even when I first knew it twenty years ago, what an inspiration has gone forth! Although the contributions which have appeared under Welch's name have been relatively few, his influence has been felt in almost every great work which has been done in the last twenty years by American students.

In the old laboratory by his side in the early years worked Sternberg and Councilman and Booker and Halsted and Sewall and Nuttall and Mall and Abbott and Williams and Howard and Flexner and Hewetson and Barker and Reed and Cullen and Wright, and many others. And what suggestion and encouragement did we all receive from the delightful talks when the "Father," as we lovingly called him, passed from desk to desk, and from his words at the meetings of the little medical society in the hospital library. But that inspiration was for no small group of men. One by one these students have carried abroad his spirit and his teachings until there is scarcely a laboratory in this country that does not contain men who owe their success to that which Welch has given them.

How rich already are the fruits of his work!

It is to you, Dr. Welch, that Councilman owes the inspiration that has guided his useful and eminent career.

It was your teachings that led to the able work of Mall and indirectly to the establishment of his department of which we are so justly proud.

It was your student, McCallum, whose contributions to our knowledge of malaria have been referred to, by one of the most eminent students in this field, as the most brilliant since the discovery of the parasite.

Reed, Lazear and Carroll were all your pupils, and 'twas with you and your old student and co-worker, Sternberg, that Reed discussed and planned the greatest achievement of American medicine—the discovery of the transmission of yellow fever.

It is your student, assistant and colleague, Flexner, whose absence to-night we so deeply regret, who presides over that great institution in New York, which the world owes to the generosity of Mr. Rockefeller. What a contrast, Dr. Welch, between that magnificent institution and your little laboratory—its legitimate mother. But, then, although this little lady is sadly in need of a new dress to-day, who knows what ova of promise she may still contain!

It is your student, Flexner, whose discovery of a protective serum against cerebrospinal meningitis is saving so many precious lives to-day.

It is to your wisdom and initiative more than to any other influence that are due any successes of the medical world started under your guidance.

These may be some of the notable results of your teachings and your influence, but they represent a small part of that which we owe you. The wide extent of your learning, and the kindly interest which you have taken in every one have brought it about that you have become the fountain to which all repair for counsel and advice. But such wisdom, such charity and kindness, such powers of judgment could not, of course, long remain the property of your students and associates alone. In matters medical you have become the general adviser of all. From one end of the country to the other no new departure is taken, no new laboratory is opened, no new chair is filled without your wise advice. How much the American Medical Association owes to your sage counsel as a member of the Board of Trustees no one will ever know.

As chairman of the Board of Health you have directly and indirectly brought more credit to the State of Maryland than almost any other living citizen.

In the oft-renewed contest with the forces of ignorance and fanaticism, allied too often, alas—unwittingly, let us hope—with influences purely sordid and vicious, you have been the fearless and masterly leader of the army of truth and light.

Not only in matters medical, but also in affairs of city and state do we seek your assistance, and one of your associates on the Charter Commission has recently testified to your growing "insight into the morbid activity of *Bacillus municipalis.*"

Among the various other ways in which your helpful influence has been felt, there is one on which special comment should be made. You have set us all a brilliant and beneficent example as the master of the art of exposition. This talent depends not only on your clearness of thought, but on a rare power of expression—a power which amounts almost to genius. No one can express a thought so simply and clearly as you.

The chief art of the true master of language lies in his simplicity.

Maeterlinck says somewhere: "The poet adds to every-day existence a something—I know not what—which is the secret of poets, and straightway it stands forth in its prodigious grandeur, in its submission to powers unknown, in its infinite relations and in its solemn misery. A chemist lets fall several mysterious drops into a vase which seems to contain only clear water, and all at once 'tis filled with a world of crystals which reveal to us that which was held in suspense in the vase where our imperfect eyes had seen nothing. So, in Philoctetus, the meager psychology of the three main characters forms but the walls of the vase which holds the clear water of every-day existence into which the poet is to let fall the revealing drops of his genius."

The beautiful symbol of the chemist and the poet has been brought to my mind more than once in listening to your words or reading your sentences. How often have the "revealing drops" of your genius brought out the crystalline kernel from involved discussion or ill-comprehended observation.

But, after all, your greatest work lies in the personal example which you have set to the hundreds of students who have passed under your care. You have taught us a religion of earnestness and simplicity and directness—a religion of charity and of self-restraint, a religion of work, not of words. You have helped us to love truth for truth's sake, and above all, you have spread far and wide that enthusiasm without which all effort is vain.

We honor you for your achievements! We respect you for your learning! We love you for yourself! And one and all, we greet you here to-night, lovingly, gratefully and happily, as master, teacher and friend.

ADDRESS BY S. WEIR MITCHELL

Mr. Chairman, Gentlemen, and You, my Friend, the Sacrificial Victim of the After-Dinner Hour: Travel in strange lands is the more pleasant for knowledge of the language spoken, and it was the fact of my lack of tongues which made me doubt how fit I was to appear on this pleasant occasion, where, as I learned somewhat appalled, everybody was expected to talk *Welch.* To stumble bewildered an intellectual tenderfoot in the learned land of Johns Hopkins might certainly give any man pause, but in the court of wisdom there must be of necessity a fool, and so I accept the position of the provider of sentimental folly and make my little venture.

'Tis said that hovering near your infant couch
The fairy forms of Art and Science flew
In generous counsel o'er the golden gifts
They bade a joyous future pledge to you.

And if, they said, your life shall fail to give
What Bacon called the "hostages to fate,"
Unnumbered friends shall challenge love with love,
And ever through thy happy hours elate.

Fair Nature, coyest of all maids that hold
Reluctant mysteries from their lovers dear,
Shall on victorious quests divinely smile
And tell her secrets to thy listening ear.

Not yours shall be, companioned by the stars,
To soar through space on thought's ambitious wings
To worlds unseen; nay, yours shall be to roam
That wondrous other realm of little things.

There, half unread, the ever less and less
Lost in the lessening less, eludes our sight
In space as sunless and more dark with fate
Than are the baleful planets of the night.

There shall you stand upon the twilight verge,
Where fades the sight of each material thing,
And baffled wonder, what an hundred years
To other eyes than ours may haply bring.

A lilliputian world to thee we give,
Where deadly swarm the grim bacterial blights,
With amboceptors strange malignant priests
For demon marriage with satanic rites.

Here stegomyia and anopheles
Are huge behemoths of this lesser sphere
Where gay spirilla wriggle lively tails
And vexed erythrocytes grow pale with fear.

"Be these your friends," the flitting fairies cried,
"But who is this that leads a pirate crew?
"Bacterium chronos! Get you gone from hence,
"Or hungry leucocytes we'll set on you!"

A truce to folly. Long ago for you
Has rung the fatal hour of Osler's jest:
Still young, the merry smile, the glowing mind,
No least sad failure ever yet confessed.

Life's summer overflow reserves for you
The golden days of lingering life's September,
October loitering waits for you, my friend,
And summer-haunted glories of November.

Perhaps Johns Hopkins has some secret charm
That lets professors very neatly swindle
The robber time and feel enfeebling days
Toward youthful vigor quite reversely dwindle!

Alas, a most appalling doom awaits!—
A pediatric clinic at the end—
Pertussis, measles, teeth to cut, and then
The bottle—but which bottle? Ah! my friend,

We'll ask of Kelly, he will surely know
When comes at last your latest, earliest year,
With all of physiology at fault
How shall you ever gently disappear?

Far be the day for you. One grief I own,
What science won my art has something cost
Since the clear mind and ever-ready smile
Were to the bedside visit sadly lost.

Ave et vale! O, magister, take
Greeting and blessing from our greatest soul!
The rippling sweetness of his echoing verse
I seem to hear from that far century roll.

Too poor my rhyme to fitly entertain
The stately splendor of the Latin line;
Ah! happy he to whom this greeting went—
Thy spirit—kinsman, Harvey, makes it thine:

Vir doctissime!
Humanissime!
Mihi Carissime!
Vale mi' Amantissime!
Tuus ex anima.

THE ADDRESS OF DR. JACOBI

Dr. Abraham Jacobi spoke as follows:

There are some inquisitive people in New York. One asked me what business I had in Baltimore. New York was good enough for such as I. "Business?" The dinner. "The dinner! What dinner?" The Welch *dinner*. "*For* what reason is there a Welch dinner just now?" What reason? William H. Welch. "I mean what occasion?" The occasion is William H. Welch. When I asked him the names of two among the greatest luxuries, I received no answer. Now, in my opinion, they are, firstly, to dine with a great man, particularly when a lot of others, such as you, are thrown in; and, secondly, to speak of him as he deserves—preferably in his absence. But *nobody* wants him absent just now. But, after all, why can't a fellow hear the fine things said about a fellow before the fellow is dead? I shall let him down easy perhaps by talking of myself a little.

I knew Dr. Welch thirty-five years ago; we worked together in Bellevue Hospital. Remember, I speak of him as he was then. I appreciated his pathology and clinical medicine; but he was full of all sorts of knowledge. He is modest—cannot help it—was made that way; never obtrusive, but he would teach. Because he had knowledge, he was modest and gentle; gentle even to me, though I was only his superior; and, what is better, *gentle to the sick*. I then felt certain that he would be a great physician or practitioner, whose make-up always requires, though it does not always furnish, head and heart. Then again I thought after a while I had been mistaken. He disappeared, went to foreign countries. Virchow and Cohnheim were still teaching us pathology—they do still, for that matter.

He returned more learned, but also more cosmopolitan; more of a medical man, but still more of a man.

Thirty years ago I delivered, before a foreign-born society in a foreign language, an address on what had just been founded as Johns Hopkins University. There was the first promise of a real university, with an actual university spirit, broad, wide horizon, warm, fertile and fertilizing, spiritual and moral. For that is the quintessence of the ideal of a university; understood or not, that was ever the ideal of a university; not as a modern teacher of the east proclaimed only last year, in a lecture room of the far west—a place where all sorts of specialties are taught. At that distant time I could say that so far as I, though only a practitioner but an adorer of the university idea and ideal, could see, the accession of William H. Welch would prove a solid foundation of a brilliant future for Johns Hopkins and an example for the future of American institutions. There are those whom our father Homer had in view when he said that not to all will the immortals appear. What he meant, and what he knew, was that they appear to some. Here is one of them. You know what he has been to Johns Hopkins, to its spirit, to its medicine, to all medicine, from the very beginning of his participation in Johns Hopkins labors. From the very beginning he was positive, but wise, learned but never pedantic, strong but prudent, keen and warm; the owner of many properties belonging to the young and strong, and to the old and wise. There are those qualities of the heart and brain which are attributed to advanced years only. But this man had and has his peculiarities. Indeed he does not believe, nor do I for that matter, that wisdom and ripeness must wait for the progressive stages of sclerotic arteries or overphosphated bones or a curved spine—at least he did not wait.

Some Welch Rabbits.—As one of the pleasing features of the dinner to Dr. Welch, the above cartoon was distributed. The artist was Prof. Max Brodel of Baltimore, whose artistic work in the portrayal of anatomic specimens and surgical procedures has frequently appeared in The Journal. He has very happily represented Dr. Welch as still the guiding spirit for these famous workers. For the benefit of our readers we name the positions of the men referred to:

Dr. J. Whitridge Williams, Professor of Obstetrics at Johns Hopkins Medical School.
Dr. Lewellys F. Barker, Professor of Medicine at Johns Hopkins Medical School.
Prof. George H. F. Nuttall, University of Cambridge, England.
Dr. William T. Howard, Jr., Professor of Pathology at Western Reserve University.
Dr. William S. Thayer, Professor of Medicine at Johns Hopkins Medical School and toastmaster of the evening.
Dr. Simon Flexner, Director of the Rockefeller Institute, New York.
Dr. William T. Councilman, Professor of Pathology at Harvard University Medical School.
Dr. Eugene L. Opie, Associate at Rockefeller Institute.
Dr. Franklin P. Mall, Professor of Anatomy at Johns Hopkins Medical School.
Dr. William G. MacCallum, Professor of Pathology at Columbia University.
Dr. Alexander C. Abbott, Professor of Hygiene at University of Pennsylvania.
Dr. George Blumer, Professor of Medicine at Yale UniversityMedical School.
Dr. Joseph C. Bloodgood, Associate Professor of Surgery at Johns Hopkins Medical School.
Dr. Thomas S. Cullen, Associate Professor of Gynecology at Johns Hopkins Medical School.

He never was a medical man only; a small part of medicine may *nowadays fill* the measure of many an alleged big man. Things were different one or two centuries ago. Then it was easy enough for a vast mind, endowed with sedentary habits and gluteal muscles, to carry a gold-headed cane, practice *medicine* according to the latest system and edit Greek or Latin incurables. A portentous doctor could be an erudite philologist and prove it. Nearer our times, Rush could sign our *independence*, *and* was, all by himself, an *army* surgeon, a busy practitioner, a prolific author and run mad over Brown. Cordell tells us that in the winter of 1789-90, George Burhanan taught in Baltimore the diseases of women and children and Brownianism: Wiesenthal anatomy, physiology, pathology, surgery, and the gravid uterus. They do not do that in Johns Hopkins any more. Their sins, if any, lie in different directions. But, cheer up, gentlemen, worse is *to* come. Holmes and Mitchell run off with Apollo to *Parnassus* and flirt, aye more than *merely* flirt, while we stand by applauding with a harem full of females, but they were nurses.

And Welch? Those who know him best, know what he has done for medicine. Medicine as a service, medicine as a part of biology and *vice versa*, and that he has worked assiduously—for life is but a song, and is wondrous long—effectually and accurately. But his accuracy was never a pharisaical fetish and no man ever lived who relied less extensively than he on the superstitious beatitude created by the actual or alleged single observation made by bending over a system of lenses only. What I always saw in him was of a different nature altogether.

When I was a boy Homer taught me that Podalirius and Machaon, the physicians of the besieging army were the most revered men, for a "healing man was to be esteemed as highly as a host of others;" by Xenophon that Socrates expected the welfare of the community to be safeguarded by doctors; later, by Descartes and Kant, that the refinement and culture of mankind must come from the teachings and practice of medicine; by our father Hippocrates, that where there is a love of medicine there is love of mankind. So I understand and applaud Welch. He is a great doctor, but a greater man. Medicine never was to him identical with one of the branches, or with the results of one or more surgical observations or revelations; not even the protection, valuable though it be, of an individual life. To him medicine has been the sum total of the physiologic knowledge of man and of the creation, and their history of the means of curing an individual accident; it is true, but more of preventing individual disease and morbidity and mortality, and those of the commonwealth, of guarding mankind against human waste by the prolongation of life, of making life in all ages, sexes, colors and stations bearable and enjoyable. That in view, he became a master in and presided over the Board of Health of Maryland; for that reason and for his universal fame whoever in these United States wants aid or counsel or direction, applies to Welch. That in view, he has created or caused to create a new charter for the administration of this big and warm-hearted city—he the learned pathologist, the great physician, the ripe statesman, the good citizen, *facillime princeps*, the dear good man.

THE RESPONSE OF DR. WELCH

When Dr. Welch rose to reply to these hearty expressions, he received another ovation and his manner showed how deeply he was touched by the events of the evening.

After expressing his thanks and grateful appreciation for the honor bestowed by the large gathering of physicians and friends, for the medallion portrait and the tributes of the various speakers, Dr. Welch said, in part: "While I am only too conscious that in the speeches and messages to-night the value of such service as I have been able to render to American medicine has been overestimated, it is true that I have had large opportunities for such service. These opportunities I owe to the profession, and it is of my debt to the profession that I wish especially to speak on this occasion. Every man owes a duty to his profession, and I should have been ungrateful indeed and recreant to a high trust if I had not endeavored to repay within my abilities the confidence reposed in me.

"The presence of Dr. Delafield at my right hand recalls my teachers and the large debt of gratitude which I owe to them. Whatever the defects of medical education in those days such teachers as these inspired their pupils with zeal and enthusiasm and high ideals. To Dr. Delafield I owe my first introduction to pathologic anatomy and his summer course with practical demonstrations awakened a lively interest, which became a genuine enthusiasm during my internship at Bellevue Hospital, where I was so fortunate as to come also under the inspiration of Dr. Janeway. In the wards of Bellevue Hospital I learned from Dr. Jacobi something of the thoroughness and spirit of German science."

Dr. Welch also spoke of his debt to his teachers in Germany and of the close ties formed with the profession in New York during his six years of connection with the Bellevue Hospital Medical College, where he said his chief delight was then, as it has continued to be, the teaching of students in the laboratory.

Grateful acknowledgement was made of the cordial reception by the profession in Baltimore and of his debt to the Johns Hopkins University and Hospital, where opportunities, previously unequaled in this country, were offered for the advancement of medical education. He expressed his good fortune in his associates and assistants, such men as Councilman, Abbott, Flexner, Barker and MacCallum, and the share of his colleagues in developing the medical school. It had been a privilege to participate in civic life, and to assist in the public health work of Maryland. While he regretted the dissipation of energy in undertaking so much outside work, it had been a great satisfaction to take part in the organization and development of the Rockefeller Institute for Medical Research. He said: "I have been highly honored by election to the presidency of the American Medical Association, the representative organization of the entire profession of this country. During the past decade the results accomplished by this association in the organization of the profession for higher standards in varied fields of medical activity have been perhaps the most significant event in American medicine. The Association should receive the loyalty and active support and cooperation of all physicians who have at heart the best interests of the profession and the advancement of American medicine."

After speaking of the educational and scientific progress of medicine during the past quarter of a century, and of the work of the physician in the future, particularly in preventive medicine, Dr. Welch, in closing, said:

"The attractions of a career in life lie in the opportunities it offers, in the congenial character of the work involved and the rewards to be gained. The profession of medicine is unsurpassed in its opportunities for service to one's fellow men. The manifold fields of activity now opened to the medical man appeal to the most varied personal inclinations and aptitudes, be these practical or scientific. The rewards of success, even of the highest success, are not in money. They are the intellectual pleasure which the physician finds in his work, the consciousness of service in the relief of suffering and the cure and prevention of disease, or it may be that highest satisfaction, some contribution to the advancement of useful knowledge, knowledge perhaps directly applicable to the healing of the nations.

"A reward to be dearly prized, but which has been conspicuously lacking for some of the great geniuses of our profession, is the expression of the esteem and good will of one's contemporaries of the profession and of the community. This highly prized reward has come to me to-night through your kindness and recognition, over-generous though they be, in overflowing measure, and in a form inspiring and never to be forgotten by me, which has touched my heart with profound gratitude, and which, I trust, will animate me with stronger desire to show, if I may, some return by increased devotion to high ideals of efficiency and service in such work as may remain for me to do."

In conclusion, the band played "Auld Lang Syne," in which all joined, standing, and the way it was sung showed that auld acquaintance could not be forgot.

BERLIN LETTER

(*From Our Regular Correspondent*)

Berlin, March 16, 1910.

Bill for the Regulation of Social Insurance

The new bill for regulation of compulsory insurance which is to reform the social legislation of Germany and which has been awaited with great interest by the German medical profession has now appeared. As I mentioned in a previous letter, the provisions of the bill first proposed, which provided for regulating the relations between the Krankenkassen and their medical officers, designed to hinder the constant strife between these two parties, met with energetic opposition on the part of medical men. Especially after the unanimous declaration of the Lübeck session of the medical association that the German physicians would not cooperate in carrying out the social legislation unless various demands were met in the new law, it was to be hoped that the government would accede to the wishes of the medical profession, but the upper limit of an income of $500 for the insured has not been generally established; exceptions are made in the case of laborers, helpers, companions, apprentices and servants. These are included in the provision for free Krankenkassen treatment even if their annual wage exceeds the sum of 2,000 marks. Further, as provided in the first bill no physician may be prosecuted on account of infringement of medical ethics or of his duty to the medical profession, if he has made a contract with the Krankenkassen under conditions which conform to the statutes. With reference to the urgent demand for free choice of physicians by the insured the government gives regulations both for the free choice of physicians and also for making contracts with special insurance physicians. The formation of contract committees, which shall serve to prevent misunderstandings and to settle such as already have arisen is provided for in the bill, and this is really of no little importance. These committees will be so much the better fitted for their task as they consist of representatives from both parties in equal numbers selected by the societies and by the physicians immediately interested in their practice. There is no doubt that the German medical profession will not be content with the improvements found in the new bill, and it is to be expected that they will engage with the same energy against the faulty provisions still remaining in this second bill as they did against the first. Their efforts must now be directed to the other legislative body, the Reichstag.

Pharmacists and Physicians

The medical council for West Prussia at a recent session resolved to ask the pharmacists' council of the province to require pharmacists not to give patients with the medicines prescribed by physicians any advertisements of other remedies.

Frequently paper containing advertisements, which is furnished to the pharmacists by the manufacturers free, is used for wrapping medicine bottles, boxes, etc. On the other hand, the pharmacists council has requested the medical council that physicians abstain from indicating a preference for a particular pharmacist, which is forbidden by law, and it also requests that physicians should write their prescriptions plainly, and in large cities have their names printed on the prescription blanks, so as to prevent injury to the pharmacists.

Pharmacology

AMERICAN DRUGGISTS SYNDICATE

The Capital Stock Is Increased and Physicians Are Invited to Come In

Since the last article[1] in The Journal dealing with the American Druggists Syndicate appeared, this cooperative "patent medicine" concern has increased its capital stock to $2,500,000. In the notice sent out by the A. D. S. calling for a special meeting of the stockholders to consider the question of increasing the stock, the statement was made that "it is our purpose to enlist the active cooperation of the honest physician, notwithstanding the opposition of the *traitorous hypocrites editing certain medical journals.*" This last clause, we believe, has a personal element. The increase in capitalization having been accomplished and a vast amount of stock created, physicians are now being appealed to, through a small pamphlet, to purchase at $10 a share the common stock of the concern. Should the "Orangeine" or "Lydia Pinkham" people ask physicians to purchase their stock and participate in the unholy profits that accrue from the sale of these nostrums the protests from an indignant profession would be no more numerous and outspoken than those which have poured in on The Journal since this A. D. S. pamphlet has reached the physicians of the country. In the booklet, which is entitled "Millionaire-Makers for Others," the A. D. S. calls attention to the vast profits that have been created from the sale of Doan's Kidney Pills, Lydia Pinkham's Compound, Swamp Root, Laxative Bromo Quinin, and other nostrums, and urges physicians to purchase stock in the American Druggists Syndicate so that a competing line of nostrums may be marketed and the physician himself get some of the profits.

SUBSTITUTION THE KEY-NOTE

There is "only one way to eliminate the nostrum evil," says the A. D. S., and that is "to make the advertising of such products unprofitable to the manufacturer." How this is to be brought about is explained in a way that must make honest druggists blush. Substitution is the method. " . . . it is only necessary to give the druggist an opportunity to offer a safe and legitimate product [that is to say an A. D. S. substitute] whenever a product of the other kind is called for." If the A. D. S. is to be believed, substitution is a widespread accomplishment: "Leading druggists are authority for the statement that they can sell such legitimate products [A. D. S. preparations] to seven out of ten who otherwise might be induced to use dangerous ones." Of the ten, the three individuals who know what they want when they want it, can be finally landed in the A. D. S. net "through intelligent literature [whatever that may be] to be given them with the packages they insist on."

Resolved to simpler terms it means that the druggist who is a member of the A. D. S. should endeavor to get the customer who wants "Antiphlogistine" to take "A. D. S. Anti-Inflammatus;" he who desires "Paine's Celery Compound" to accept "A. D. S. Celery Compound;" he who feels the need of "Bromo-Seltzer" to be satisfied with "A. D. S. Effervescent Bromo Headache Salt;" he who pines for "California Syrup of Figs" to be content with "A. D. S. Fig Syrup Compound," and she who calls for "Lydia Pinkham's," to take instead "A. D. S. Pelvitone."

THE PHYSICIAN'S PART

And where does the physician come in? If he is a stockholder in the A. D. S. he is "*given an opportunity* to share equally with druggists in the profits derived from the sale of the legitimate [?] products offered by this organization." In other words the druggist is to substitute, the public is to dope itself, and the medical profession is to participate in the financial rewards that come from such a combination.

Should the physician wonder whether this self-drugging on the part of the public would not have a financially deleterious effect on his practice he is assured that the A. D. S. remedies include "only such medicinal articles as would be least likely to conflict with the interests of physicians." Nothing is said of the fact that practically the only A. D. S. preparations advertised are its rankest nostrums: Pelvitone; Kidney Remedy; Cold and Grippe Remedy; Rheumatic Remedy, and so on. Neither is it acknowledged that should the nostrum element be eliminated from the activities of the American Druggists Syndicate the whole structure would collapse.

And the ethics of it? Well, we are told that:

> "The physician or pharmacist who allows his conception of ethics to prevent him from providing for the material wants of his family and for their future welfare by a fear of being accused of *commercialism is lacking in good judgment.*"
>
> "Old worn-out moth-eaten notions of ethics should not prevent honorable physicians and pharmacists from working in harmony for the increase of the legitimate profits of both professions."

DISPENSING PHYSICIANS, BEWARE!

An interesting sidelight, in that it contains a veiled threat, is to be found in this A. D. S. booklet. The dispensing physician is the text of the story. Such a physician, we are told, lived in a small town and, although there were two excellent drug stores, he would not write prescriptions. What happened? The druggists "held a conference and soon decided what they would do to teach the physician a lesson. They employed *a bright and competent [nothing said about honor!]* young physician to write free prescriptions and make free professional calls. It took only about three weeks to convince the first doctor on the ground that he would soon be starved out of the field if he did not make peace with the druggists." The physician, then, we are told, went to the druggists, acknowledged the error of his ways and promised to be good ever after. As the A. D. S. pamphlet adds: "This is intended only as an illustration of what could be done by pharmacists in *extreme cases, if they found it necessary,* as it was in this instance."

We presume the object of this story is to engender the same kindly feeling between physicians and druggists as must be developed between members and non-member druggists by those A. D. S. advertisements which, by inference, inform the public that the only way to be sure it is getting pure drugs is to patronize a member of the American Druggists Syndicate.

Altogether, the pamphlet, and its message to physicians, cannot be described in language more pertinent and fitting than that used by one of The Journal's correspondents, who characterized it as "truly a monumental bit of impertinence."

Correspondence

Excretion of Hexamethylenamin

To the Editor:—In The Journal, March 12, there appeared an article by Dr. Barton on the excretion of the decomposition product of hexamethylenamin by the mucous membrane of the ear. After reading this article it occurred to me that if formaldehyde is excreted by the mucous membrane of the ear, possibly it is also excreted by the mucous membrane of the bronchi, and also perhaps in the alveoli of the lungs.

To test this, I administered the drug to a patient with chronic bronchitis who happened to have at the time mucopurulent expectoration; after three doses, the character of the expectoration changed from mucopurulent to mucoid, and after six doses the quantity was very much diminished. A portion of the sputum tested after three doses had been administered gave a positive reaction in a very short time. A specimen after the sixth dose also gave a positive reaction, but only after several hours.

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[1] Previous articles dealing with the A. D. S. have been reprinted in pamphlet form. This will be sent to those who want it. Enclose a stamped addressed envelope with request.

At my request, Dr. Percy Smith, the superintendent of the District of Columbia tuberculosis hospital, is testing it in advanced cases of tuberculosis, with the idea of checking the profuse purulent expectoration and, perhaps, of rendering it sterile. I feel that great results may possibly be obtained.

George H. Heitmuller, Washington, D. C.

The Cutaneous Reaction to Tuberculin

To the Editor:—It has been the practice at the New Mexico Cottage Sanatorium to use the Detre differential test in all our patients on admission, our purpose being to acquire data as to the reliability of the test. In connection with the cutaneous test I have several times observed a curious phenomenon and have not noticed that it has been reported heretofore. If it has not I would like to take this opportunity to record it.

Months, and in one instance a year, after the performance of the test, a dose of tuberculin will be reached which will give rise to a very slight reaction and following the reaction, or coincident with it rather, there is at once a recrudescence of all the phenomena at the sight of the old skin test, acting very much as though the individual had had a second cutaneous application of tuberculin.

E. Bullock, M.D., Silver City, N. M.

Association News

THE ST. LOUIS SESSION

Announcement of Reduced Railroad Rates Secured and Special Trains Arranged

The Committee on Transportation and Place of Session submits the following report concerning rates and trains to the St. Louis session in June:

RAILROAD RATES

The Central Passenger Association and the Western Passenger Association, which include all railway lines operating in the states of Ohio, Michigan, Indiana, Illinois, Iowa, Wisconsin, Minnesota, North and South Dakota and Missouri, will make a rate of one fare and a half for the round trip, tickets to be sold June 4 to 8, inclusive. The return limit is June 20, with provision for extension of the limit to July 20 if ticket is deposited with joint agent at St. Louis and deposit fee of $1 paid by the passenger.

The Trunk Line and New England associations, which include all lines operating in the states of Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, West Virginia, Delaware, Maryland and the District of Columbia, have authorized a round-trip rate of one fare and a half, tickets to be sold June 3 to 6, inclusive. The return limit is June 20, with provision for extension to July 20 by deposit of ticket and payment of deposit fee of $1.

The Trans-Continental Association has authorized a one-fare rate of $67.50 from all California points, tickets on sale June 3, 4 and 5; the return limit is three months. The same rate is to apply from North Pacific coast points in Oregon and Washington, tickets to be on sale June 2 only; the return limit is three months from date of sale.

So far, the Trans-Missouri Association, which includes lines operating in Kansas, Nebraska, Wyoming, Colorado and New Mexico, has made no reduced rates, nor have the South Western or South Eastern associations, except that the South Western has authorized a rate of a fare and a half from southern Missouri.

It is hoped that rates may yet be obtained from the territory embraced by these associations, and further announcement will be made by the committee concerning them later.

Considering the territory covered, these are the best rates which the Association has had since the two-cent laws went into effect.

SPECIAL TRAINS

The following special trains have been arranged:

A day train over the Chicago and Alton road will leave Chicago Monday, June 6 at 9 a. m., arriving at St. Louis about 5 p. m., in ample time for members to get located in their hotels for the night.

This train will be composed of reclining chair cars for those who do not wish to patronize the Pullman parlor cars, a library club car with buffet, dining car, Pullman parlor cars and observation car. This train will provide a beautiful ride through the state by daylight.

A night special will leave Chicago over the Chicago and Alton road at 11:30 p. m., arriving at St. Louis about 8 a. m. This train will consist of reclining chair cars (if desired) without extra charge, club cars with buffet and Pullman drawing-room sleeping cars.

These special trains from Chicago will stop at Joliet, Dwight, Pontiac, Chenoa, Bloomington, Atlanta, Lincoln, Springfield, Carlinville and Alton to pick up members and will make any other intermediate stops if previous notification is given that members wish to board the trains.

Members may leave Peoria at 12:20 p. m. on the Chicago and Alton, connecting with the special at Springfield.

Special trains will leave Kansas City over the Chicago and Alton road on Monday, June 6, at 9 a. m. and 11:30 p. m., the former making a day run through Missouri, arriving at St. Louis at 5 p. m., and the latter a night run, arriving at St. Louis at 8 a. m. In their makeup these trains will be the counterpart of the trains between Chicago and St. Louis and will stop at the following Missouri stations: Independence, Odessa, Higginsville, Marshall, Slater, Glasgow, Higbee, Centralia and Mexico and at intermediate points if previous notification is given that members wish to join the trains.

From Minneapolis and St. Paul a special train will be run over the Chicago, Milwaukee and St. Paul road to Chicago, and from Chicago to St. Louis over the Chicago and Alton.

A special train, or special drawing-room sleepers set aside for the exclusive use of members, will be run over the Toledo, St. Louis and Western (Clover Leaf line) leaving Toledo, Ohio, at 7:15 p. m. and arriving at St. Louis at 8 o'clock in the morning. This train will stop at Continental, Delphos and Ohio City, Ohio, and Decatur, Marion, Kokomo, Frankfort and Veedersburg, Ind., and Charleston, Ill. Stops will be made at other points if previous notification be given that members wish to take the train.

A special train, or cars as may be needed, has been arranged to run over the New York Central system, including the Boston and Albany from Boston. This train, which will stop at prominent intermediate points, will leave Boston and New York in time to reach St. Louis early Tuesday morning, June 7.

Arrangements have been made so that through tickets over the New York Central lines from Cleveland and all points east thereof may be exchanged in St. Louis at the city office of the Chicago and Alton for return trip by way of Chicago over the Chicago and Alton line, with stopover at Chicago. Likewise, tickets reading "by way of Chicago and Chicago and Alton" may be exchanged for return trip by direct route over New York Central lines.

Further information concerning reservations on any of these trains will appear in The Journal later.

M. L. Harris, Chairman,
Committee on Transportation and Place of Session.

The Section Meeting Places

The St. Louis Committee on Arrangements sends the following announcements:

The section meeting places are located on Grand avenue and on streets interesecting Grand avenue. Those meeting places located on intersecting streets are not more than 300 feet distant from Grand avenue. This distance between the extremes of the district is about one-half mile, but all are in close proximity to other halls, and special attention was given to grouping correlated sections.

The only hall that is not in the Grand avenue district is the Coliseum, where the Registration Bureau, the Commercial and Scientific Exhibits, the Postoffice, etc., will be located.

No hall in the midst of the meeting places was large enough to accommodate these departments.

The street car facilities are most excellent, cars running at two and three minute intervals, and arrangements are being made for special service on occasions when the members will travel in large bodies at any particular hour. Taxicabs will also be at hand, and a special rate will be allowed for transporting the members from the Coliseum, where the Registration Bureau will be established, to the Grand avenue district.

The section and other meeting places are as follows:

Medicine: Third Baptist Church, Grand and Washington Aves.

Surgery: Odeon Theatre, Grand and Finney Aves.

Obstetrics and Diseases of Women: Y. M. C. A. Building—Association Hall, Grand and Franklin Aves.

Laryngology and Otology: Sodality Hall, Grand Ave., between Pine and Laclede.

Ophthalmology: Aschenbroedel Hall, 3535 Pine St.

Diseases of Children: Grand Avenue Presbyterian Church, Sunday School Room, Grand and Washington Aves.

Pharmacology and Therapeutics: Delmar Avenue Congregational Church, Delmar, west of Grand Ave.

Stomatology: Y. M. C. A. Building—Small Hall, Grand and Franklin Aves.

Nervous and Mental Diseases: St. Louis University Library, *Grand Ave., head of East Pine.*

Dermatology: Odeon Bldg—Recital Hall, Grand and Finney Aves.

Preventive Medicine and Public Health: Knights of Columbus Bldg., 3549 Olive St.

Pathology and Physiology: Y. M. C. A. Building—Lecture Hall, Grand and Franklin.

Scientific and Commercial Exhibits, Postoffice, Registration Office: Coliseum, Washington and Jefferson.

President's Reception: First Regiment Armory, Grand and Manchester Aves.

General Session: Odeon Theatre, Grand and Finney Aves.

House of Delegates: St. Louis Medical Society, 3524 Pine St.

The Committee on Section Meeting Places will endeavor to have all halls fully equipped with every needed appurtenance to facilitate the transaction of the work of the sections. Communications on this subject should be addressed to Dr. H. Tuholske, Chairman of the Committee on Section Meeting Places, 609 Metropolitan Building, St. Louis.

Good Weather Probable

The Committee on Arrangements desires to assure the members that the weather in the early days of June is delightful. According to the records of the Weather Bureau the temperature for the first ten days in June varies from 70 to 80 degrees. There need be no fear of extreme heat in St. Louis during the period of the session. The Committee on Arrangements wishes this information widely disseminated.

E. J. Goodwin, Secretary,
Committee on Arrangements.

NEW MEMBERS

List of new members of the American Medical Association for the month of March, 1910:

ALABAMA

Banks, M. J., Jackson's Gap.
Fosbee, R. A., Alexander City.
Henderson, H. H., Bolling.
Kimbrough, T. G., Thomaston.
McCown, W. S., Hazel Green.
Rudulph, C. M., Birmingham.

ARKANSAS.

Brunson, Asa, Pine Bluff.
Dickson, Paul L., Paragould.
Harrison, A. G., Kensett.
Hartsell, W. L., Draughon.
Lunsford, C. B., *Chickasawba.*
Powell, J. W., Springfield.

CALIFORNIA

Abrahamson, Milton, San Francisco.
Beyer, Herman, Oceano.
Chadwick, F. C., San Francisco.
Cook, W. H., McKittrick.
Davis, F. J., Oroville.
Etcheverry, M. H., San Francisco.
Evans, T. J., Loma Linda.
Fellows, Alfred, Los Angeles.
Fielding, G. A., Sawtelle.
Hunter, G. G., Los Angeles.
Joyce, Elizabeth F., Winters.
Julien, E. H., San Francisco.
Leech, C. R., Walnut Creek.
Lewitt, F. C., San Francisco.
Nichols, H. L.,
Osborne, A. E.,
Taussig, Edwa

COLORADO

Andrew, John, Longmont.
Burnett, A. L., Silverton.
Campbell, L. D., Denver.
Carey, J. D., Timnath.
Peabody, J. R., Colorado Springs.
Wiest, Roy, Estes Par

CONNECTICUT

DeBonis, Domencio, Hartford.
Gilmore, J. L., West Haven.
Swett, P. P., Hartford.

DISTRICT OF COLUMBIA

Garnett, A. G. P., Washington.
Strobel, Mary L., Washington.
Walter, W. F., Washington.

FLORIDA

Campbell, E. T., Citra.
Kinsey, J. P., Pinetta.
Martinson, Elsie M., Tampa.
Mitchell, L. [illegible], Tampa.
Paul, L. H., Caryville.

GEORGIA

Abercrombie, T. F., Dallas.
Adams, H. P., Savannah.
Collins, Katharine R., *Atlanta.*
Fincher, E. F., East Atlanta.
Scott, A. R., McDonough.
White, T. E., Fitzgerald.

IDAHO

Allen, C. S., Atlanta.

ILLINOIS

Aiton, Mary [illegible], Summer Hill.
Aschauer, H. A., Springfield.
Barnsback, R. S., Edwardsville.
Baxter, A. C., Springfield.
Bernard, E. L., Springfield.
Bullard, R. I., Springfield.
Caldwell, J. C., East St. Louis.
Compton, C. W., Springfield.
Corr, Lucinda H., Carlinville.
Crain, C. H., *Chicago.*
Deichmann, O. H., Springfield.
Doane, G. H., O'Fallon.
Doerann, A. F., Chicago.
DuMars, E. C., Peoria.
Fishman, C. J., Chicago.
Franz, C. H., Aurora.
Gammage, A. E., Chicago.
Gibson, E. P., Louisville.
Gill, P. W., Chicago.
Hall, T. H., Gillespie.
Harlan, L. C., Madison.
Haskell, W. A., Alton.
Hayes, R. H., Chicago.
Hoover, F. B., Chicago.
James, A. C., Springfield.
Jenkins, H. E., Forest Park.
Joyce, W. M., Chicago.
Kerchner, F. W., Glen Carbon.
King, C. D., Gillespie.
Luzader, Katherine B., Greenville.
Mansfield, W. A., Washington.
Matthew, J. B., Blue Mound.
Mautz, G. J., Springfield.
Maxon, O. F., *Springfield.*
May, L. J., Cobden.
McQuillan, A. B., E. St. Louis.
Menoher, J. A., Speer.
Millard, J. L., *Grand Ridge.*
Milligan, C. W., Springfield.
Morgan, T. W., Virden.
Nelson, C. S., Springfield.
Oliver, A. H., Edwardsville.
Page, T. H., Peoria.
Parks, Jennie W., Cuba.
Reis, Jr., Henry, Belleville.
Renner, C. P., Belleville.
Roberson, W. H., Mt. Carmel.
Stanton, F. W., Joliet.
Stanton, *R. F., E. St. Louis.*
Turner, J. A., Waukegan.
Wagner, T. H., Joliet.
Wallace, J. W., Aledo.
Weil, Albert, Peoria.
Willard, F. W., Chicago.
Wolfe, J. A., Chicago.
Wright, H. G., DeKalb.

INDIANA

Anderson, J. C., Indianapolis.
Baker, R. E., Orleans.
Bonn, H. K., Indianapolis.
Burris, E. W., Indianapolis.
Dunham, W. F., Kempton.
Elliott, J. C., Guilford.
Goodale, A. W., Orland.
Gordon, E. R., Hobart.
Green, W. L., Pekin.
Greenwald, W. C. E., Indiana Harbor.
Hollis, W. A., *Hartford City.*
Lakin, A. N., State Line.
Levi, W. D., Jeffersonville.
Mathys, Alfred, Mauckport.
Null, L. S., New Haven.
Pell, G. M., Carbon.
Peters, D. C., Greentown.
Province, O. A., Franklin.
Rozelle, C. C., LaGrange.
Tilson, S. M., Indianapolis.
Vigus, C. B., Point Isabel.
Winans, H. M., Muncie.
Worster, W. W., LaFayette.
Wright, U. A., Coatesville.

IOWA

Bowie, L. L., Moorhead.
Houston, Bush, Montezuma.
Lovett, I. M., *Lineville.*
Parsons, I. U., Malvern.
Powell, V. E., Red Oak.
Stalford, G. A., Radcliffe.
Stoakes, C. S., Battle Creek.
Throckmorton, R. F., Derby.

KANSAS

Clarkson, W. H., Manhattan.
Duncan, F. W., Coffeyville.
Kenner, J. J., Lawrence.
Knowles, H. P., Mound City.
Mahan, R. S., West Mineral.
Newkirk, Jessie Slavens, Kansas City.
Nichols, W. J., Pittsburg.
Tanquary, E. D., Little River.
Wallace, F. E., Chase.
Whitfield, R. J., Ft. Scott.

KENTUCKY

Brandon, R. W., LaFayette.
Bruce, E. T., Louisville.
Carum, J. R., Ashbyburg.
Duvall, C. H., Warsaw.
Godbey, D. M., Perryville.
Greenleaf, P. E., Louisville.
Henderson, E. L., Louisville.
Hohnstedt, J. H., Ft. Thomas.
Kelly, Harris, Louisville.
Lewis, R. H., Wildie.
Little, W. T., Calvert City.
Marshall, T. J., Bardwell.
Overall, A. C., Mt. Washington.
Phillips, H. J., Louisville.
Ramey, W. G., Carter.
Reynolds, B. F., Carlisle.
Sparks, J. C., Willard.
Warren, J. P., Lexington.
White, G. W., Oakland.
Wiliams, D. J., Ford.
Williams, R. H., New Hope.
Williams, W. H., Franklin.
Young, I. C., Lowes.

LOUISIANA

Bahn, C. A., New Orleans.
Brahic, P. E., Moreauville.
Brosnan, D. S., *New Orleans.*
Brown, F. T., New Orleans.
Engelbach, Theodore, Grand Isle.
Gillaspie, W. A., New Orleans.
Gouaux, F. T., Lockport.
Kahle, P. J., New Orleans.
Lowe, V. F., New Orleans.
Murdock, L. A., St. Joseph.
Quirk, W. A., Evergreen.
Sheppard, J. K., New Orleans.
Tusson, Walter, New Orleans.

MAINE

Files, E. W., Portland.
Gage, I. B., Warren.
Head, O. B., New Sharon.
Nash, A. W., Jefferson.
Poore, L. H., Webb's Mills.
Wheeler, L. H., South Brewer.
York, A. I., Wilton.

MARYLAND

Bird, J. W., Sandy Spring.
Byrne, B. J., Ellicott City.
Conradi, F. A., Baltimore.
Griffith, W. A., *Upper Marlboro.*
Kalbaugh, A. B., Westernport.
King, I. N., Barstow.
McMillan, S. M., Riverdale.
Moseley, Jr., W. E., Baltimore.
O Mara, J. T., Baltimore.
Vest, W. E., *Baltimore.*
Willey, W. T., Baltimore.

MASSACHUSETTS

Atchison, C. M., New Bedford.
Boos, W. F., Jamaica Plain.
Collins, O. W., So. Framingham.
Dubois, E. C., Springfield.
Flagg, H. H., Charlestown.
Holmes, A. B., Kingston.
Lane, C. G., Woburn.
Lesses, Max, Salem.
Mellus, Edward, West Newton.
Mann, W. O., Boston.
Miller, G. F., Boston.
Mixter, W. J., Boston.
Morrison, R. F., Holyoke.
Mysel, H. A., Haverhill.
Perry, H. B., Northampton.
Quest, J. F., Adams.
Sanborn, Byron, Topsfield.
Sandler, Samuel, Fall River.
Senesac, A. N., New Bedford.
Siskind, A. L., Lawrence.
Spooner, L. H., Boston.
Swift, M. B., Fall River.
Wilcox, H. H., Springfield.

MICHIGAN

Barnard, J. H., Tustin.
Bland, J. P., Adrian.
Campbell, W. T., Brown City.
Hoag, R. B., Wayne.
Howlett, E. V., Pontiac.
Huntley, V. F., Manton.
Kaven, G. H., Unionville.
Kremer, John, Grand Rapids.

Martin, E. L., Maple Rapids.
McManus, E. A., Sherman.
Seager, G. B. M., Adrian.
Staines, Carrie S., Fenwick.
Townsend, Wesley, Salt Ste Marie.
Vollmer, Maud J., Battle Creek.

MINNESOTA

Aune, Martin, Minneapolis.
Hart, M. J., LeRoy.
Hoegh, Knut, Minneapolis.
Knight, R. R., Minneapolis.
Oberg, Emanuel, Minneapolis.
Readman, I. M., Onamia.
Shulean, Nellie S., Cambridge.

MISSISSIPPI

Criss, R. J., Youngs.
Durley, B. H., Aberdeen.
Furr, J. M., Aberdeen.
Givhan, J. E., Pontotoc.
Harris, J. A., Webb.
Hood, B. S., Bond.
LeBaron, Chas., Gulfport.
McNeill, J. H., Olive Branch.
McRee, F. V., Brookhaven.
Mohler, D. G., Gulfport.
Murry, W. M., Dumas.
Perry, J. A., Shuqulak.
Powell, H. B., Ocean Springs.
Rowan, W. H., Wiggins.
Turner, R. L., Meridian.
Whitaker, Jos., Natchez.

MISSOURI

Ameiss, F. C., St. Louis.
Bates, S. L., Adrian.
Bleyer, A. S., St. Louis.
Boislinere, L. C., St. Louis.
Bosse, E. H., St. Louis.
Bostick, Will, St. Louis.
Drescher, F. B., St. Louis.
Dunigan, J. P., Sullivan.
Engelbrecht, John, Starryhill.
Engelmann, O. R., St. Louis.
Faris, J. C., Caruthersville.
Frazer, H. S., St. Louis.
Gentle, Doke, New Franklin.
Graves, Spencer, St. Louis.
Hagerty, M. E., St. Louis.
Meinhard, J., St. Louis.
Miller, H. E., St. Louis.
Miller, T. D., Aurora.
North, E. P., St. Louis.
Schaub, C. W., St. Louis.
Schuchat, W. L., St. Louis.
Songer, H. E., Jamesport.
Stephenson, J. T., Tina.
Sturgis, W. E., Kennett.
Tainter, P. R., Calloo.
Thompson, A. W., Galt.
Thompson, R. L., St. Louis.
Timberman, J. H., Marston.
Ude, Waldemar, St. Louis.
Vores, C. P., Unionville.
Vosburgh, C. A., St. Louis.
Whiteside, E. E., River Aux Vases.
Young, A. O., St. Louis.
Youngman, J. A., St. Louis.

MONTANA

Cram, R. L., Park City.

NEBRASKA

Bleick, L. C., Bloomfield.
Evans, E. B., Cody.
Langrall, C. D. D. M. M. S., Minatare.
Panter, R. C., Dorchester.
Sher, Philip, Omaha.
Smith, J. G., Wahoo.
Slagle, C. E., Alliance.
Snell, C., Tecumseh.

NEVADA

Belanger, G. L., Ft. Dermitt.
Heppner, A. H., Reno.

NEW HAMPSHIRE

Rogers, F. N., Manchester.
Varney, A. H., Newfields.

NEW JERSEY

Anthony, W. H., Plainfield.
Bailey, F. R., Elizabeth.
Bennett, R. S., Asbury Park.
Foulks, Sara E., Trenton.
Gelbach, R. W., Hoboken.
Hunter, James, Jr., Westville.
MacDonald, Jr., Jos., East Orange.
McNamara, T. C., Hoboken.
Neal, C. B., Millville.
Plume, C. A., New Brunswick.
Randolph, J. M., Rahway.
Read, C. H., Trenton.
Stack, J. F. X., Hoboken.
Wadler, F. C., Newark.
Wilkinson, G. H., Moorestown.

NEW MEXICO

Davis, Augustus, Texico.
Dillon, F. A., Laguna.
Slack, J. C., Clayton.
Worley, Preston, Clovis.

NEW YORK

Asch, J. J., New York City.
Brill, A. A., New York City.
Cooley, H. E., Angelica.
Cross, J. B., Buffalo.
Crowe, J. M., Watertown.
Cudmore, J. H., New York City.
Dederer, Carleton, New York City.
Gibson, E. D., Buffalo.
Hancock, E. G., New York City.
McLaren, W. A., Brooklyn.
Moore, S. A., Buffalo.
Pfetschinger, F., New York City.
Rossano, A. T., New York City.
Spann, J. H., New York City.
Spence, H. D. L., Utica.
Swift, H. F., New York City.
Taylor, E. C., Central Islip.
Warren, John, New York City.
Weber, W. E., New York City.
Weil, Henry, New York City.
Wise, L. D., New York City.

NORTH CAROLINA

McBrayer, L. B., Asheville.
Nicholson, J. L., Richlands.
Reed, C. E., Banner Elk.
Sloop, E. H., Plumtree.

NORTH DAKOTA

Arnold, E. W., Medford.
Wilder, K. W., Wyndmere.

OHIO

Breyfogle, E. W., Chillicothe.
Dudley, Harlan, Macedonia.
Harper, W. H., Columbus.
Hobson, A. B., Salem.
Johnston, C. E., Sidney.
Kuhn, E. T., Columbus.
Lawrence, E. J., Nottingham.
Weaver, Elizabeth M., Akron.

OKLAHOMA

Chapman, T. S., McAlester.
Evans, W. G., Stuart.
Fulkerson, W. C., Marshall.
Gay, J. P., McAlester.
Graydon, A. S., Idobel.
Griffith, Alfred, McAlester.
Holbrook, R. W., Perkins.
Long, T. J., Atoka.
Miller, D. W., Blackwell.
Mills, F. A., Foss.
Moore, M. O., Braden.
Risser, A. S., Blackwell.
Smith, I. T., Fay.
Watkins, J. C., Hallett.

PENNSYLVANIA

Brown, L. M., Woodville.
Chase, T. L., Philadelphia.
Dunn, H. A., Erie.
Gilland, J. C., Greencastle.
Hall, A. B., Philadelphia.
Reisert, Wm., Philadelphia.
Simmonds, H. T., Shamokin.
Washabaugh, W. B., Erie.
Widdowson, F. R., Clymer.
Woods, R. F., Philadelphia.

SOUTH CAROLINA

Edwards, J. E., Spartanburg.
Hill, J. C., Abbeville.
Holman, F. K., Sumter.
Ilderton, Wm., Florence.
Kershaw, T. G., Walterboro.
Walker, C. M., Westminster.

SOUTH DAKOTA

Moore, L. S., Terraville.

TENNESSEE

Elam, K. P., Tate Springs.
Gallaher, R. L., Caryville.
Ruble, W. G., Morristown.
Shields, J. A. P., Norma.

TEXAS

Boothe, S. P., Cheapside.
Hanna, J. J., Quanah.
Henschen, G. E., Georgetown.
Herzog, Sofie, Brazonia.
Mathews, W. J., Naples.
McCloud, B. L., Bryson.
Smith, A. A., Goolesboro.
Smith, W. H., D'Hanis.
Steck, O. E., Bellville.

UTAH

Ries, Anna F., Ogden.
Robinson, A. A., Ogden.

VERMONT

Adams, B. D., Burlington.
Hanson, L. W., Montpelier.

VIRGINIA

Burnham, M. P., Harrisonburg.
Sycle, M. C., Richmond.

WASHINGTON

Dietz, Wm., Spangle.
Mertz, E. F., Concrete.

WEST VIRGINIA

Cracraft, L. K., Elm Grove.

WISCONSIN

Christensen, F. C., Racine.
Comee, W. C., Cecil.
Cunningham, R. B., Cadott.
Freeman, D. R., Colby.
Haigh, Edith S., Madison.
Hinrichsen, J. A., Larsen.
Hopkins, J. W., Madison.
Knutson, Oscar, Prairie Farm.
Ludden, H. D., Mineral Point.
Provost, A. J., Oshkosh.
Shaykett, F. E., Brandon.

WYOMING

Magahy, C. A., Lusk.
Smith, C. K., Fort Washakie.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

DISTRICT OF COLUMBIA: Washington, April 12-15. Sec., Dr. George C. Ober, 125 B St., S. E.

ILLINOIS: Chicago, April 14-16. Sec., Dr. J. A. Egan, Springfield.

NEW MEXICO: Santa Fe, April 11-12. Sec., Dr. J. A. Massie.

OKLAHOMA: Ione Hotel, Guthrie, April 12. Sec., Dr. Frank P. Davis, Enid.

WEST VIRGINIA: Wheeling, April 12-14. Sec., Dr. H. A. Barbee, Point Pleasant.

New Buildings at McGill University

The new buildings to be occupied by the Medical Faculty of McGill University which are being erected to replace those destroyed by fire in 1907 are rapidly nearing completion. They will cost $750,000 and are located near the old medical buildings on a site which was given to the university by Lord Strathcona, the chancellor of McGill University, who has *contributed more than half of the cost of the new buildings.* An interesting program has been arranged for the ceremonies with which the buildings are to be inaugurated, June 6 and 7, at which the Governor General of Canada will officiate.

It has been determined to mark the occupation of the new buildings by a reunion of as many as possible of the physicians who have graduated from McGill. Communications from representatives of each of the 45 classes indicate there will be a unique gathering of McGill graduates from all parts of the world in Montreal, June 6 and 7.

The Public Service

Medical Department of the Army

Changes for the week ended April 2, 1910:

Banister, William B., lieut. col., will, in addition to his present duties at Fort Snelling, take charge of the office of chief surgeon, St. Paul, Minn., making not to exceed three trips per week to St. Paul and return to Fort Snelling, Minn.

Glennan, *James D., lieut. col.*; Ashburn, Percy M., major, appointed members of an Army retiring board to meet at San Francisco.

Birmingham, H. P., lieut. col.; McCaw, Walter D., lieut. col.; Darnall, Carl R., major, appointed members of a board to meet at the Army Medical Museum Bldg., this city, for the physical examination of candidates for appointment and Second Lieutenants.

Mills, R. H., dental surgeon, reported for temporary duty, Plattsburg Barracks, N. Y.

Whitcomb, C. C., capt., relieved from duty at Fort Wingate, N. Mex., and ordered to duty at Medical Supply Depot, New York City.

Whitmore, Eugene R., major, the detail of, on temporary duty in the Bureau of Science, Department of the Interior, P. I., is further extended to Aug. 15, 1910.

Casaday, George H., dental surgeon, returned to Presidio of Monterey, Cal., from leave of absence.

Flynn, Thomas J., 1st lieut., M. R. C., ordered to proceed from Fort Ethan Allen, Vt., to Madison Barracks, N. Y., for temporary duty.

Scott, Minot E., dental surgeon, ordered to proceed from Vancouver Barracks, Wash., to Fort Stevens, Ore., and Fort Columbia, Wash., for temporary duty.

Johnson, Charles W., 1st lieut., M. R. C., honorably discharged from the service of the United States.

Ashburn, James K., 1st lieut., M. R. C., honorably discharged from the service of the United States, to take effect April 4, 1910.

Rutherford, Henry H., major; Jones, Percy L., capt.; Metcalfe, Raymond F., capt.; Farrow, Edgar J., 1st lieut., M. R. C.; Tetrault, Charles A., 1st lieut., M. R. C., relieved from duty in Philippines Division, and will proceed on transport to sail from Manila, P. I., July 15, to San Francisco, and on arrival to report by telegraph to the Adjutant General of the Army, for further orders.

Bierbower, Henry C., 1st lieut., M. R. C., granted 3 months' leave on arrival at station in the United States.

Maynard, Edward B., 1st lieut., M. R. C., recently appointed, ordered to Fort Snelling, Minn., for duty.

Ingalls, R. E., dental surgeon, reported for duty at Fort Douglas, Utah.

Hull, Alva R., 1st lieut., M. R. C., relieved from duty at Fort Sam Houston, Texas, to take effect about April 12, 1910, and will then proceed to his home. Lieutenant Hull is relieved from active duty in the Medical Reserve Corps, on his arrival at his home.

Holland, Josiah H., 1st lieut., M. R. C., relieved from duty at Fort Barrancas, Fla., and ordered to Fort Douglas, Utah, for duty.

McCown, Thomas B., 1st lieut., M. R. C., relieved from duty at Fort Douglas, Utah, and ordered to Fort Barrancas, Fla., for duty.

Coffey, A. McD., 1st lieut., M. R. C., ordered to accompany Co. I, Signal Corps, from Sam Houston, Texas, to San Francisco, and on completion of this duty to proceed to his home.

Smith, Allen M., major, ordered to accompany the 9th Infantry from Sam Houston, Texas, to San Francisco, and on completion of this duty to return to his home.

McAndrew, P. H., major, granted 5 days' leave of absence.

McDonald, R. C., 1st lieut., M. R. C., recently appointed, is ordered to Fort Sam Houston, Texas, for duty.

Medical Corps of the Navy

Changes ordered March 21, 1910:

Diehl, O., med. inspector, detached duty as fleet surgeon, Asiatic Fleet, on *Charleston*, and continue other duties.

Shipp, E. M., surgeon, detached duty Naval Hospital, Philadelphia; to duty Navy Recruiting Station, New York.

Wilson, G. B., surgeon, detached duty *Wabash*, Navy Yard, Boston; to duty as fleet surgeon, U. S. Asiatic Fleet, on *New York*.

Ryder, C. E., P. A. surgeon, detached duty New York Nautical Training Ship *Newport*, to Naval Medical School, Washington, D. C., for instruction.

Dunn, H. A., P. A. surgeon, detached duty Naval Proving Ground, Indian Head, Md.; to Naval Medical School, Washington, D. C., for instruction.

Payne, J. H., P. A. surgeon, detached duty Naval Hospital, New York; to Naval Medical School, Washington, D. C., for instruction.

Seaman, W., P. A. surgeon, detached duty Naval Recruiting Station, New York; to Naval Medical School, Washington, D. C., for instruction.

Fauntleroy, A. M., P. A. surgeon, detached duty *New York* and *Indiana;* to duty Naval Hospital, Naval Home, Philadelphia.

Stepp, J., P. A. surgeon, detached duty *Franklin*, Navy Yard, Norfolk, Va.; to duty Naval Medical School, Washington, D. C., for instruction.

Tolfree, H. M., P. A. surgeon, detached duty Naval Magazine, Iona Island, N. Y.; to duty Naval Medical School, Washington, D. C., for instruction.

Cather, D. C., P. A. surgeon, detached duty Navy Recruiting Station, Kansas City, Mo.; to home and granted leave 1 month.

Warner, R. A., P. A. surgeon, detached duty Naval Hospital, Norfolk, Va.; to duty New York Nautical Training Ship *Newport*.

Hayden, R., asst.-surgeon, to duty Naval Proving Ground, Indian Head, Md.

Kerr, W. M., asst.-surgeon, detached duty Naval Training Station, Newport, R. I.; to duty Naval Station, Guam, M. I.

Lawrence, H. F., asst.-surgeon, detached duty Naval Station, Tutuila, Samoa; to home and wait orders.

Valz, E. V., asst.-surgeon, detached duty *Mississippi;* to examination for promotion, Washington, D. C., and on completion wait orders.

Stibbens, F. H., asst.-surgeon, detached duty *Pennsylvania;* to examination for promotion, Washington, D. C., and on completion wait orders.

Rhoades, G. C., asst.-surgeon, detached duty *Scorpion;* to home and wait orders.

The following are detached from duty at Naval Medical School, Washington, D. C., and ordered as follows:

Connor, W. H., acting asst.-surgeon, to duty Naval Station, Tutuila, Samoa.

Camerer, C. B., acting asst.-surgeon, to duty Naval Hospital, Norfolk, Va.

Riddick, W. J., acting asst.-surgeon, to duty Naval Medical School Hospital, Washington, D. C.

Phillips, E. W., acting asst.-surgeon, to duty Naval Hospital, New York.

Thompson, F. W., acting asst.-surgeon, to duty Navy Recruiting Station, Kansas City, Mo.

McMullin, J. J. A., acting asst.-surgeon, to duty Naval Magazine, Iona Island, N. Y.

French, G. R. W., acting asst.-surgeon, to duty Naval Hospital, Mare Island, Cal.

Irvine, W. L., acting asst.-surgeon, to duty Naval Training Station, Narragansett Bay, R. I.

Davidson, A. B., acting asst.-surgeon, to duty Naval Hospital, Mare Island, Cal.

Jenkins, H. E., acting asst.-surgeon, to duty *Franklin*, Navy Yard, Norfolk, Va.

Robbins, I. W., acting asst.-surgeon, to duty *Pennsylvania*.

Walton, D. C., acting asst.-surgeon, to duty *Scorpion*.

Thomas, G. E., acting asst.-surgeon, to duty *Wabash*, Navy Yard, Boston, Mass.

Bass, J. A., acting asst.-surgeon, to duty *New York*.

Robertson, G. E., acting asst.-surgeon, to duty *Mississippi*.

Changes for the week ended March 26, 1910:

Von Wedekind, L. L., surgeon, detached from the Naval Recruiting Station, Chicago, and ordered to command Naval Hospital, Annapolis, Md.

Grieve, C. C., P. A. surgeon, detached from the Naval Hospital, Norfolk, Va., and ordered to the Naval Recruiting Station, Chicago.

Kuder, W. S., P. A. surgeon, resignation accepted, to take effect April 1, 1910.

Whitmore, G. B., asst.-surgeon, detached from the *Wisconsin* and ordered to duty in connection with fitting out the *Delaware*, and to duty on board that vessel when placed in commission.

Dodge, A. H., asst.-surgeon, detached from the Naval Hospital, Las Animas, Colo., and ordered to the *California*.

Bloerdorn, W. A., acting asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Las Animas, Colo.

Hart, S. D., acting asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Asiatic Station.

Cecil, A. B., acting asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *Wisconsin*.

Public Health and Marine-Hospital Service

Changes for the week ended March 30, 1910:

Mead, F. W., surgeon, directed to proceed to Tampa and Port Tampa City, Fla., on special temporary duty.

Carter, H. R., surgeon, leave of absence for 1 month from March 11, 1910, on account of sickness, amended to read 9 days from March 11, 1910, on account of sickness.

Wasdin, Eugene, surgeon, granted 2 months' leave of absence from March 22, 1910.

White, J. H., surgeon, granted 14 days' leave of absence from April 1, 1910.

Lavinder, C. H., P. A. surgeon, granted 4 days' leave of absence en route to Germany.

Lumsden, L. L., P. A. surgeon, directed to proceed to Omaha, Neb., on special temporary duty.

Anderson, John F., P. A. surgeon, directed to proceed to Charlottsville, Va., on special temporary duty.

Fricks, L. D., P. A. surgeon, relieved from duty at Fort Stanton, N. Mex., and directed to proceed to Mobile Quarantine Station, Ala., and assume command.

Korn, W. A., P. A. surgeon, on being relieved by Passed Assistant Surgeon Charles W. Vogel, directed to proceed to Stapleton, N. Y., and report to the medical officer in command for duty and assignment to quarters.

Vogel, Charles W., P. A. surgeon, relieved from duty at Stapleton, N. Y., and directed to proceed to Reedy Island Quarantine Station, Del., and assume command.

de Valin, Hugh, P. A. surgeon, relieved from command of Mobile Quarantine Station, Ala., and from temporary duty at the Hygienic Laboratory, and directed to proceed to Havana, Cuba, for duty in the office of the Consul-General.

Hasseltine, H. E., asst.-surgeon, relieved from duty at Buffalo, N. Y., and directed to proceed to Seattle, Wash., and report to the commanding officer Revenue-Cutter *Rush* for duty.

Leake, James P., asst.-surgeon, granted 4 days' leave of absence from March 18, 1910, on account of sickness.

Knight, Carlisle P., asst.-surgeon, directed to proceed to Buffalo, N. Y., and report to the medical officer in command for duty.

Flinn, Thomas, W. P., acting asst.-surgeon, granted 20 days' leave of absence from April 1, 1910.

Hamilton, H. J., acting asst.-surgeon, granted 2 days' leave of absence from March 23, 1910.

Knight, Carlisle P., commissioned Assistant-Surgeon March 16, 1910.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE WASSERMANN REACTION

To the Editor:—Please give me a complete list of articles on the Wassermann reaction. R. A. Weston, M.D., Des Moines, Iowa.

Answer.—As hundreds of articles have appeared on this subject, it is impossible to give a complete list here. Practically all these articles were listed, as they appeared, in The Journal's department of Current Medical Literature, and in the Index to Subjects which is published in The Journal every six months, in the last number of the volume. The following are some of the more valuable and recent ones taken from the Index. Most of those published in The Journal have full bibliographies in the footnotes:

Schaudinn and Hoffman: Arb. a. d. k. Gsndhtsamte, 1905, xxii, 835.

Wassermann: *Berl. klin. Wchnschr.*, 1907, xliv, 12.

Nonne: Clinical Diagnosis of the Syphilogenous Diseases of the Nervous System, The Journal, July 24, 1909, p. 289.

Sachs: The Wassermann Reaction in Relation to Diseases of the Nervous System, The Journal, Sept. 18, 1909, p. 929.

Noguchi: Serodiagnosis of Syphilis, The Journal, Sept. 18, 1909, p. 935.

Castelli: The Wassermann Reaction, The Journal, Sept. 18, 1909, p. 936.

Noguchi: A Rational and Simple System of Serodiagnosis of Syphilis, The Journal, Nov. 6, 1909, p. 1532.

Wieder and L'Engle: Studies of the Precipitin Tests for Syphilis, The Journal, Nov. 6, 1909, p. 1535.

Litterer: Serodiagnosis of Syphilis, The Journal, Nov. 6, 1909, p. 1537.

Harris and Corbus: Clinical Value of the Spirochæta Pallida in Diagnosis and Treatment of Syphilis, The Journal, Dec. 5, 1908, p. 1928.

Neilsen: *Monatsh. f. pract. Dermat.*, xlviii, No. 2, p. 5.

Fleischmann and Butler: Serum Diagnosis of Syphilis, The Journal, Sept. 14, 1907, p. 934.

Plaut, Fornet and Schereschewsky: Serodiagnosis of Syphilis, Tabes and paralysis, *München. med. Wchnschr.*, July 23, 1907; abstr. in The Journal, Sept. 28, 1907, p. 1154.

Citron: Serodiagnosis of Syphilis, *Berl. klin. Wchnschr.*, Oct. 28, 1907; abstr. in THE JOURNAL, Dec. 7, 1907, p. 1962.

Butler: Serum Diagnosis of Syphilis, *New York Med. Jour.*, Nov. 30, 1907; abstr. in THE JOURNAL, Dec. 14, 1907, p. 2037.

Harris and Corbus: Parasitology of Syphilis, THE JOURNAL, Sept. 4, 1909, p. 757.

Glaser and Wolfsohn: Serodiagnosis of Syphilis Controlled by Autopsy Findings, *Med. Klin.*, Nov. 14, 1909.

Stopczanski: Serodiagnosis of Syphilis, *Wien klin. Wchnschr.*, Nov. 25, 1909; abstr. in THE JOURNAL, Jan. 8, 1910, p. 170.

Chirivino: Diagnosis of Syphilis by Staining Reaction, *Riforma Med.*, Feb. 14, 1910; abstr. in THE JOURNAL, March 26, 1910, p. 1098.

Ehrmann and Stern: Wassermann Reaction in Syphilis, *Berl. klin. Wchnschr.*, Feb. 7, 1910.

Kiralyfi: Connection Between Wassermann Reaction and Antisyphilitic Treatment, *Wien klin. Wchnschr.*, Feb. 3, 1910.

Butler: The Serum and Precipitate Reactions for Syphilis and their Clinical Value, THE JOURNAL, April 2, 1910, p. 1116.

Society Proceedings

COMING MEETINGS

Alabama, Medical Association of State of, Mobile, April 19-22.
Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Society, Washington, D. C., May 3-5.
American Laryngological Association, Washington, D. C., May 3-5.
Am. Laryn., Rhin. and Otol. Society, Washington, D. C., April 28-30.
Amer. Medico-Psychological Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American Ophthalmological Society, Washington, D. C., May 3-4.
American Orthopedic Association, Washington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Arizona, Medical Association of, Phoenix, April 20-21.
Association of American Physicians, Washington, D. C., May 3-5.
California, Medical Society of State of, Sacramento, April 19-21.
Conf. State and Prov. Bds. of Health, Washington, April 28-29.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
District of Columbia, Medical Association of, Washington, April 26.
Georgia, Medical Association of, Athens, April 20-23.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Maryland, Med. and Chirurgical Faculty of, Baltimore, April 26-28.
Mississippi State Medical Association, Oxford, April 12.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Association, Hunter's Hot Springs, May 11.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
South Carolina Medical Association, Laurens, April 19-21.
Tennessee State Medical Association, Memphis, April 12-14.
Texas, State Medical Association of, Dallas, May 10-12.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Twentieth Annual Meeting, held at Baltimore, March 21-22, 1910
(Continued from page 1158)

Report of Judicial Council

In connection with the several reports recently made on the standing of medical colleges, the council recommended that it be given authority to order an investigation of the colleges in membership that were reported on adversely by other organizations, and to investigate any other colleges in membership that may be subject to like criticism; further, that these investigations be made by two persons selected by the council, that the expense of such investigation be borne by the college inspected, and that other educational bodies interested in examining colleges be invited to participate in such inspection and examination. The council recommended the acceptance of the applications of the Tulane University Medical Department, and Harvard University Medical Department. Application for membership was made by the Medical Departments of the University of Vermont and Syracuse University, but inasmuch as these applications were received during the session, too late for inspection of these colleges, no action could be taken.

Report of Committee on Medical Education

The committee endorsed the present system of matriculation record blanks and urged a faithful compliance with the present entrance standards on the part of all the colleges in membership. The committee also recommended that the present entrance standard be increased as soon as practicable, and urged that the state medical examining boards and the various state educational bodies make an earnest effort to raise the standard in their respective states, so that these will be at least the equal of the association standards. The committee emphasized the importance of recognition of the standard public high school and asked that the colleges in membership lend their influence and support to a high school educational basis. The combined baccalaureate and medical course now given by many universities was endorsed. The committee also recommended that there be submitted at the next annual meeting a curriculum for the five-year medical course. The concentration plan of teaching was recommended as a correct pedagogic principle, and the association was urged to place itself on record as favoring this plan and to instruct the committee to arrange an outline for a curriculum based on the concentration plan of teaching.

Report of Committee on Medical Research

The committee called attention to the rules recommended by a committee of the American Medical Association, and urged that this association concur in the recommendations of the American Medical Association committee, and that these rules be posted in all laboratories where animal experimentation is carried on and also that individuals performing animal experimentation should comply not only with the letter but the spirit of these rules.

Report of Committee on Equipment

The Committee on Equipment did not amend the report made in 1909, but urged that the colleges adhere as closely as possible to the equipment standard prepared by the secretary and adopted by the association in 1908.

Report of Committee on Curriculum

This committee recommended a four-thousand-hour schedule without any allowable diminution; the number of scheduled hours to represent the actual number of hours scheduled for each student. While the distribution of time between didactic and laboratory instruction in the laboratory subjects was recommended, the committee did not regard it as possible to distribute the time in the clinical subjects among the various kinds of exercises. Such distribution was left to the good judgment of the college authorities, to be arranged to suit their individual conditions. The committee recommended, however, that not more than one-half the time devoted to any subject should be devoted to clinical and didactic work, and that at least one-half of the time should be devoted to section or individual work. The schedule recommended by the committee is based on a course extending over thirty-two weeks, of which thirty weeks shall consist of actual teaching, and two weeks be allotted to examinations. The hours assigned are not to be considered "credit" hours. The committee considered it unwise to regulate courses too much in detail, and submitted the following curriculum for consideration as a constitutional amendment at the next annual meeting:

REPORT OF COMMITTEE OF CURRICULUM, ADOPTED MARCH 22, 1910

	Total Hours.	Lect. Rec. Dem.	Lab. Work.
DIVISION I. ANATOMY—720 Hours (18 Per Cent.)			
(a) Gross Anatomy (including Applied Anatomy)	510	120	390
(b) Histology and Mic. Anatomy	135	30	105
(c) Embryology	75	30	45
DIVISION II. PHYSIOLOGY AND CHEMISTRY—600 Hours (15 Per Cent.):			
(a)	180	60	120
(b)	75	30	45
(c)	105	30	75
(d)	240	165	75
DIVISION III. PATHOLOGY, BACTERIOLOGY AND HYGIENE—450 Hours (11.25 Per Cent.):			
(a) Bacteriology	135	30	105
(b) Hygiene and General Diet	45	45	...
(c) Pathology	270	60	210

DIVISION IV. PHARMACOLOGY, MATERIA MEDICA AND THERAPEUTICS—240 Hours (6 Per Cent.):

(a) Pharmacology	105	40	65
(b) Materia Medica and Pharmacology	80	...	...
(c) Therapeutics	55	...	...

DIVISION V. MEDICINE AND MEDICAL SPECIALTIES—970 Hours (24.25 Per Cent.):

(a) General Medicine (including Clinical Microscopy)	640	...	...
(b) Pediatrics	150	...	...
(c) Nervous and Mental Diseases	105	...	...
(d) Jurisprudence, Ethics and Economics	30	...	...
(e) Dermatology and Syphilis	45	...	...

DIVISION VI. SURGERY AND SPECIALTIES—720 Hours (18 Per Cent.):

(a) General Surgery	510	...	...
(b) Orthopedics	45	...	...
(c) Genitourinary Diseases	45	...	...
(d) Eye	60	...	...
(e) Nose, Ear, Throat	60	...	...

DIVISION VII. OBSTETRICS AND GYNECOLOGY—300 Hours (7.5 Per Cent.):

(a) Obstetrics	195	...	...
(b) Gynecology (including some Abdominal Surgery)	105	...	...

Fifteen of the 640 hours in medicine are designed for the teaching of dietetics as applied to diseased conditions—practical dietetics. Fifteen of the 45 hours allotted to hygiene are to be devoted to the consideration of the more fundamental principles of dietetics. The allowance for pediatrics is intended to include instruction in the exanthemata. The surgery peculiar to children may be given from the chair of pediatrics or from the chair of surgery. Instruction in surgery should be confined to what the general practitioner needs. More special work should be provided for by advanced or postgraduate courses. The time allotted to obstetrics does not include the time spent in the care of confinement cases. The committee recommended that each student should personally manage at least five cases. The relations of gynecology and surgery were considered, but the committee did not attempt the solution of the problem. In case gynecology does not include any abdominal surgery, or very little of it, the committee recommended that the whole or a part of sixty hours should be transferred to surgery. The committee recommended that more attention be paid to the teaching of economics.

Advancement of Medical Education

DR. G. MILTON LINTHICUM, Medical and Chirurgical Faculty of Maryland: The highest ideals of modern medicine are not being striven for in a practical way. The science of eugenics does not receive the attention it deserves. The physician is in a better position to understand the causes and factors which produce departure from the normal than is any other trained scientist. The large medical schools, with equipment and means, associated with large and diverse hospital advantages, must investigate moot questions and the application of newer scientific theories in the treatment of disease. Progress and evolution in medicine must be met by adequate provision by teaching institutions. The segregated, independent, and unendowed institutions cannot meet the conditions which are essential. Medical training has grown more expensive with a correspondingly diminishing income from students, and to meet expenses money must be derived from other sources. The lengthening of the medical course has, in my opinion, reached the point beyond which it is unsafe to go; it is contrary to the economics of human life to lengthen the time for medical training beyond four years. I can see no reason why the vacation period should not be shortened and thus the time of instruction increased in each of the four years.. I do not regard the college degree as an essential requirement for admission, as it may carry with it only literary training, which in itself is doubtless of value and yet is not commensurate with the value of time spent in obtaining it. Teachers find that the high-school graduate grasps details and observes with more precision than the student who has spent several years in a purely literary pursuit. If the professional course must be lengthened, it should be backward into the college course. The teaching of anatomy, biology, chemistry, physiology and botany should be a part of the college preparatory course, and should be dealt with in the medical school only in relation to research and clinical application. This would relieve the curriculum without lengthening the medical course. The other alternative is to teach such subjects in the first year of the medical course, increasing the course to five years.

Concentration Plan of Teaching

DR. HENRY A. CHRISTIAN, Harvard Medical School: Concentration is employed in two portions of the medical curriculum at Harvard; each differs somewhat from the other and concerns divergent subjects. The first group includes the subjects of the first year and a half; anatomy, histology, embryology, physiology, biologic chemistry, bacteriology and pathology (including neuropathology and surgical pathology). These subjects are so arranged that the student studies only two of them in a given period of time. The student occupies his forenoons with one subject and his afternoons with another, with the exception of one month of the first year, in which the entire day is devoted to anatomy, and two months of the second year in which the entire day is devoted to pathology. Each group of two subjects is completed and the examination held before new subjects are begun. Anatomy, histology and embryology are taught during the first half of the first year; physiology and biologic chemistry are taught during the second half of the first year; bacteriology and pathology are taught during the first half of the second year. The second portion of the curriculum to which the concentration plan is applied at Harvard includes all the subjects of the fourth year. This work is entirely elective, while all work up to that time is prescribed. Each elective course consists of one month's work, occupying a minimum of 125 hours. Usually but a single subject is studied in a given month and not more than two subjects may be studied at one time. The student elects which plan he will pursue. The concentration plan is not used during the second half of the second year, nor during any part of the third year. That portion of the curriculum is devoted to the preliminary and more general study of medicine, surgery, obstetrics, pharmacology, therapeutics, and the specialties. The concentration plan for the first year and a half has been in operation practically unmodified for ten years, and the fourth year elective system for five years.

For the occasional student this system is manifestly an advantage. The regular student has the opportunity to choose his own instructor, which is an advantage, as the student gets much from the personality of the teacher, and when the teacher is personally agreeable, this is accentuated. Again, it allows the student to balance up his work. The expression of opinion from the teachers is very strongly in favor of the fourth year electives as a general plan. As a result of experience, the Harvard faculty is in favor of the concentration plan throughout, and of the elective plan in the fourth year. A too rigid application of concentration teaching is not believed to be best suited to the medical student of to-day. More modification of the plan in application to anatomy seems desirable than for other subjects, as there is less satisfaction expressed with the present concentration teaching of anatomy than with the other subjects. I regard the concentration plan with favor as a system, but believe it should be modfied slightly to increase its elasticitiy and particularly that in applying the concentration plan of study a course should not end abruptly, but certain correlated exercises should be continued after the main facts of a subject have been acquired by concentration study. The amount of modification made should vary with the different subjects of study, and should be adapted to the local conditions of each institution.

DISCUSSION

DR. F. M. BRIGGS, Tufts College Medical School: The concentration plan has been tried at Tufts, and found very successful. We carry it through the entire second year, teaching pharmacology, materia medica, therapeutics and physiologic chemistry in the second semester of the second year. The fourth year is only partly elective, which we think a much better way. We require clinical medicine and clinical surgery of all third and fourth year students, so that they will have had the experience which every general practitioner should have. The elective subjects are given at the end of the fourth year.

The College Association Standard

Mr. Abraham Flexner, Carnegie Foundation for Advancement of Teaching: The rules of the association very properly state that the entrance standing shall be the minimum requirement for admission to the medical course. An admission standard is required in order to insure a minimum degree of maturity and fitness prior to the student's beginning his medical education. The medical curriculum is constructed in content and arrangement on the supposition that students who undertake to master it have enjoyed the education in question, and therefore enter the medical school with a preliminary equipment in knowledge and power. The educational question, whatever it may be, must have been received prior to the beginning of the medical course. It is the manifest intention that a four-year high school standard should be upheld by the colleges. At best, it is not altogether satisfactory. A number of the colleges in membership are operating on a standard in advance of the minimum requirement of the association. Unfortunately, colleges that are on a high school basis do not, as a rule, enforce this standard, because they permit admission with conditions amounting to not more than six points. Such a concession is unwise, because the first year in a medical school is an extremely arduous one. Add to this the necessity of removing conditions to the extent of six points, and the result is apparent. Students not infrequently are allowed to remove these conditions some time during the college course. In New York state a uniform four-year high school matriculation basis is assured, but the actual standard of any institution is the minimum basis on which it is willing to admit students. The words "accredited" or "approved" high school differ in meaning in different parts of the country. Ordinarily, it means a high school that has been officially recognized by some competent educational authority. In New England this authority is the New England College Entrance Certificate Board. In the middle west it is the North Central Association of High Schools and Secondary Schools. In the various states the state university authorities determine the high school standing. No high school that is not mentioned in one of these lists is accredited or approved, and members of this association cannot, without violating the constitution, accept the diploma of a high school that is not on one of these lists. In many states the state board of examiners, the state superintendent of public instruction or his deputy, or an examiner selected by the college pass on the entrance credentials in rather a perfunctory manner, with the result that students are admitted in some instances with no more than a two-year high-school education. A teacher connected with a local preparatory school may be the examiner and, if the student is deficient, this teacher will act as his tutor. The weakest showing is made by the certificates from reputable instructors, accepted in lieu of some board examination. The registration offices of every well-conducted academic institution have at hand all the data necessary to pass intelligently on any set of credentials. It seems to me that this association would do well to throw the entire question into the hands of such institutions without prejudice to the interests of any medical school that actually wishes to enforce the standard. In many states, the state university could properly perform this duty; elsewhere, an equally suitable arrangement could be made with an endowed institution. A state that desires to enforce a four-year high-school requirement could specify as satisfying its requirements a certificate of admission to a state university requiring a four-year high-school education, a certificate of admission to any institution that is a member of the Association of American Universities, or an institution on the accepted list of the Carnegie Foundation for the Advancement of Teaching, a certificate of the Regents of the University of the State of New York, or a certificate by the College Entrance Examination Board for fourteen points. Personally, I am persuaded that just now the association would be unwise to raise its standards, although particular institutions may do as they please. They deserve to be encouraged to go ahead. The general situation now needs order, organization, real values more than anything else. There must be secured an actual four-year high-school standard.

(To be continued)

Marriages

Overton Brooks, M.D., to Miss Emilgene Wortsman, both of Chicago, recently.

Eugene S. Talbot, M.D., Jr., to Miss Della Boardman, both of Chicago, March 29.

Daniel S. Hager, M.D., to Miss Mary Nicholas, both of Downers Grove, Ill., March 28.

Leopold Kaffie, M.D., Natchitoches, La., to Miss Jeannette Weil of Corpus Christi, Texas, March 15.

Halvor Larson Harley, M.D., Williamstown, N. J., to Miss Alice Robison of Milesburg, Pa., March 28.

Winfield H. Ammarell, M.D., Pittsburg, Pa., to Miss Anna E. Wicklein of Gibraltar, Pa., March 21.

William Otto Pauli, M.D. Cincinnati, Ohio, to Miss Winifred Helen Weeks of Toronto, Ont., March 29.

Frederick William Valkenaar, M.D., to Miss Reka L. Hofmeister, both of Chancellor, S. D., March 2.

Deaths

Jonathan Edwards Tefft, M.D. Medical College of Ohio, Cincinnati, 1865; acting assistant surgeon, U. S. Army in 1862, and later assistant surgeon of the First Arkansas Volunteer Cavalry during the Civil War; a member of the American Medical Association; president of the Missouri State Medical Association in 1871; president of the Southwest Missouri Medical Society in 1880, and of the Springfield Society in 1886; a member of the Mississippi Valley Medical Association; a member of the board of education of Springfield from 1871-1874, and president of the board for two years; lecturer on genitourinary surgery in the University of Missouri, Columbia, from 1878-1886; senior surgeon to St. John's Hospital, Springfield, since 1890; division surgeon to the Kansas City, Fort Scott and Memphis Railroad since 1881, and consulting surgeon to the Frisco System since 1890; surgeon to the Children's Home; one of the most widely known practitioners of southwest Missouri; died at his home in Springfield, March 25, from cerebral hemorrhage, aged 73.

Oscar C. DeWolf, M.D. New York Medical College, New York City, 1858; Medical Department of the University of France, Paris, 1860; from 1877-1889, health commissioner of Chicago; of national prominence in sanitary matters; the first commissioner of health to cause warning cards to be placed on houses where contagious disease existed; during whose administration house-to-house vaccination was first thoroughly enforced; assistant surgeon of the First Massachusetts Cavalry and surgeon of the Second Massachusetts Cavalry and the Reserve Brigade during the Civil War; formerly a member of the many learned societies; professor of surgical pathology in the Medical School of the University of Ohio, and later professor of state medicine and public hygiene in the Northwestern University Medical School; died at his home in Chester Center, Mass., March 28, from cerebral hemorrhage, aged 74.

David McComb Devendorf, M.D. College of Physicians and Surgeons, New York City, 1861; formerly a member of the Medical Society of the State of New York; and president of the Herkimer County Medical Society; for several months a surgeon in the U. S. Army General Hospital, Washington, D. C., during the Civil War; at various times, president, health officer, village trustee, and member of the municipal commission of Herkimer, N. Y.; died at the Fort Dalas Hotel, Miami, Fla., March 22, from paralysis, aged 73.

Montgomery Bottom, M.D. Hampden Sydney Medical College, Richmond, Va., 1849; for nearly half a century a practitioner at Breckenridge, Mo.; formerly a member of the American Medical Association; president of Caldwell County Medical Society and Grand River District Medical Society; president of the Breckenridge Board of Education from 1868-1888; a member of the Virginia legislature in 1853; died at his home in Breckenridge, March 20, from nephritis, aged 81.

James Wray Bailey, M.D. Atlanta (Ga.) Medical College, 1860; vice-president of the American Medical Association in 1888; a member of the Medical Association of Georgia; formerly president of the State Board of Medical Examiners and of the Hall County Medical Society; a surgeon in the Confederate Service during the Civil War; for many years vice-president of the State Banking Company, Gainesville; died at his home in that city, March 24, aged 71.

Ella Louisa Dexter, M.D. Woman's Medical College of Pennsylvania, 1881; a member of the Massachusetts Medical Society; the New England Ophthalmological Society; New England Hospital Medical Society; ophthalmologist to the New England Hospital for Women and Children, Boston, and to the Pope Dispensary; died at her home in Chestnut Hill, Boston, February 3, from rheumatic arthritis, aged 52.

Francis W. Patterson, M.D. Medical College of Ohio, Cincinnati, 1859; University of Maryland, Baltimore, 1889; a member of the Medical and Chirurgical Faculty of Maryland; and a surgeon in the Confederate service during the Civil War; for a time United States Inspector of contagious diseases of animals; died at his home in Catonsville, Baltimore, March 22, from senile debility, aged 74.

Alfred Nelson Beach, M.D. Bellevue Hospital Medical College, 1870; of Cooperstown, N. Y.; for several years surgeon on steamships running between San Francisco and China; at one time a member of the general assembly of New York, and for two years police surgeon of New York City; died in Thanksgiving Hospital, Cooperstown, N. Y., March 10, from general breakdown, aged 61.

Henry J. Beyerle, M.D. Philadelphia College of Medicine and Surgery, 1851; in 1862 a member of the Indiana legislature; for 45 years a resident of Goshen, Ind.; for more than 30 years editor and proprietor of the *Goshen Times;* for 4 years a member of the city council and for two terms a member of the school board; died at his home, March 24, from senile debility, aged 86.

James Mitchell Blackford, M.D. Starling Medical College, Columbus, Ohio, 1865; a member of the Ohio State Medical Association; mayor of Martins Ferry, Ohio, in 1906; a member of the local school board for nine years; charter member of the Martins Ferry Hospital Association, and a director of the institution; died at his home, March 26, from senile debility, aged 72.

George M. Bazemore, M.D. University of Nashville, Tenn., 1861; Bellevue Hospital Medical College, 1874; a member of the Tennessee State Medical Association; for many years local surgeon at Cleveland for the Southern Railway; chairman of the Cleveland Board of Health; died at his home, March 24, from heart disease, aged 76.

Jefferson L. Thorpe, M.D. Washington University, St. Louis, 1886; a member of the American Medical Association; local surgeon at Jefferson City for the Missouri Pacific, Missouri, Kansas and Texas, and Chicago and Alton railroads; a member of the Cole County Board of Health; died at his home, March 22, from uremia, aged 47.

Gardner Perry Pond, M.D. University of California, San Francisco, 1893; a specialist on diseases of the eye, ear, nose and throat of San Francisco for several years, and later a resident of Los Angeles county; formerly a member of the American Medical Association; died at his home in Pasadena, March 19, aged 41.

Hector H. Goodman, M.D. University of Maryland, 1881; for three years surgeon to the Baltimore Police Department; and for 25 years medical director of the Baltimore Life Insurance Company; died in the Hebrew Hospital in that city, March 20, from cerebral meningitis, following an operation on the nose, aged 60.

George M. Bell, M.D. University of Michigan, Ann Arbor, 1870; Chicago Medical College, 1871; Bellevue Hospital Medical College, 1875; for more than 40 years a practitioner of Benton Harbor, Mich.; died March 27, at the University Hospital, Chicago, from cancer of the spleen, aged 61.

Henry A. C. Poppenhusen, M.D. University of Pennsylvania, Philadelphia, 1894; formerly city physician of Washington, Mo., and coroner of Franklin county; died at his home in Hermann, March 14, from the effects of carbolic acid, believed to have been taken with suicidal intent, aged 41.

George W. Carroll, M.D. Kentucky School of Medicine, Louisville, 1868; of Smithsonia, Ala.; a member of the Medical Association of the State of Alabama and a Confederate veteran; fell from a train near Barton, Ala., March 26, and died from his injuries a short time later, aged 70.

Roland C. Irving, M.D. Bellevue Hospital Medical College, 1877; a member of the Broome County Medical Society and Binghamton Academy of Medicine; first lieutenant and assistant surgeon, First Infantry, N. G., N. Y.; died at the home of a friend in Binghamton, March 17, aged 50.

Elisha Fenn, M.D. Bellevue Hospital Medical College, 1887; of New York City; a member of the Medical Society of the State of New York; for several years a member of the Seventh Regiment; died in Roosevelt Hospital, New York City, March 26, from pneumonia, aged 57.

Thomas J. Norris, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1874; a member of the American Medical Association, and organizer of the first medical society in Macon county, Mo.; a Confederate veteran; died at his home in Macon, March 23, aged 72.

Albert V. Ellershaw, M.D. Jefferson Medical College, 1891; a member of the Medical Society of the State of Pennsylvania; and formerly a practitioner of Norristown and Bridgeport, Pa.; died at the home of his father in Blackpool, England, recently.

Leslie Teasdale Pease, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878; a member of the Illinois State Medical Society; a member of the council of Cisco; and a member of the school board for many years; died at his home, March 15, aged 57.

Harry Ellis Clemson, M.D. University of Maryland, Baltimore, 1894; a member of the American Medical Association; medical director of the Silver Cross Home for Epileptics, Port Deposit, Md.; died at his home, March 21, from heart disease, aged 37.

William Wallace Cole, M.D. Jefferson Medical College, 1869; a member of the Medical Society of the State of Pennsylvania; a veteran of the Civil War; assistant city physician of Pittsburg; died at his home, March 25, from heart disease, aged 67.

Samuel Jay Holliday, M.D. Northwestern Medical College, St. Joseph, Mo., 1882; a member of the American Medical Association; formerly of Pollock, Mo.; died at his home in Pennville, Mo., March 2, from lobar pneumonia, aged 53.

Joseph Dawson, M.D. Rush Medical College, 1885; Hahnemann Medical College of the Pacific, San Francisco, 1892; three years surgeon to the State Penitentiary, Joliet, Ill.; died at his home in Wauconda, Ill., March 24, aged 63.

John Blaine Laidley, M.D. Long Island College Hospital, Brooklyn, 1883; of Conway, Mass.; manager of the local interurban railway; died in the Franklin County Hospital, Greenfield, Mass., March 18, from influenza, aged 51.

William Henry Harrison Sharp, M.D. University of Pennsylvania, 1868; Bellevue Hospital Medical College, 1870; a veteran of the Civil War; died at his home in Muhlenberg, Pa., January 6, from diabetes mellitus, aged 69.

David H. Reed (license, years of practice, Ohio, 1896); for fifty-five years a practitioner of North Fairfield, Ohio; for two terms a member of the state legislature; died at his home in that place, March 21, from pneumonia, aged 78.

Welton O'Bannon, M.D. Washington University, St. Louis, 1875; a member of the Missouri State Medical Association; mayor of New Madrid, Mo., for sixteen years; died in St. Louis, March 16, from nephritis, aged 56.

Eli Perry Rainwater, M.D. University of Louisville, 1891; (license, Tenn., examination, 1889); a member of the Tennessee State Medical Association; died at his home in Trion, March 26, from heart disease, aged 55.

Frank Worman Myrick, M.D. College of Physicians and Surgeons, New York City, 1899; a member of the Medical Society of the State of New York; died at his home in Binghamton, March 21, from pneumonia, aged 34.

Edward Sutton, M.D. College of Physicians and Surgeons, New York City, 1888; a member of the Medical Society of New Jersey; died at his home in German Valley, January 5, from cirrhosis of the liver, aged 43.

Walter John Smith, M.D. Yale University, New Haven, 1878; for three years an apothecary in the United States Navy; died at his home in Olneyville, Providence, March 13, from heart disease, aged 53.

George Fame Gaines, M.D. Louisville Medical College, 1877; of Madison, Ind.; died in the Central Indiana Hospital for the Insane, Indianapolis, February 21, from the effects of an overdose of morphin, aged 54.

Perry E. Tayer, M.D. Detroit College of Medicine, 1907; of Adrian, Mich.; a member of the Michigan State Medical Society; died in the Adrian Hospital, March 25, from pneumonia, aged 27.

Joseph Howard Mansur, M.D. Medical School of Maine, Brunswick, 1890; a member of the American Medical Association; died at his home on Orr's Island, Maine, Dec. 27, 1909, aged 44.

James Harvey O'Rear, M.D. Rush Medical College, 1873; at one time a member of the American Medical Association; died at his home in Medford, Okla., March 13, from chronic nephritis, aged 73.

William Moore Riddick, M.D. University of Pennsylvania, Philadelphia, 1856; a member of the Medical Society of the State of North Carolina; died at his home in Hartford, March 16, aged 79.

Thomas Benton Cable, M.D. Miami Medical College, Cincinnati, 1886; a member of the Ohio State Medical Association; died at his home in Pemberton, March 20, from nephritis, aged 53.

William S. Ruthrauff, M.D. University of Wooster, Cleveland, Ohio, 1876; formerly of Mountaindale, Pa.; died at his home in Coffeyville, Kan., March 22, from intestinal disease, aged 61.

William Hillswell Long, Jr., M.D. Jefferson Medical College, 1902; a member of the American Medical Association; died at his home in Philadelphia, March 25, from pneumonia, aged 48.

Alexander C. Sabin, M.D. Bennett Medical College, Chicago, 1882; formerly of Beatrice, Neb.; died at his home in Fairfield, Neb., March 20, from cerebral hemorrhage, aged 71.

Thomas Clay Nelson, M.D. New York Homeopathic Medical College, New York City, 1867; of Augusta, Ga.; a Confederate veteran; died at his home in Augusta, March 21, aged 66.

Susan Kendall Daggett Whitford, M.D. Bennett Medical College, Chicago, 1870; a pioneer woman practitioner of Elgin, Ill.; died at her winter home in Ozona, Fla., March 16, aged 73.

Petrus Nelson, M.D. Hahnemann Medical College, Chicago, 1872; said to have been the first specialist in ophthalmology in Minnesota; died at his home in St. Paul, March 21.

Isaac H. Dix, M.D. Cleveland University of Medicine and Surgery, 1869; of Pratt, Kan.; died at the home of his daughter in Salina, Kan., March 20, from influenza, aged 63.

Ralph Marcus Cole, M.D. Harvard Medical School, 1883; a member of the Massachusetts Medical Society; died at his home in Boston, March 12, from erysipelas, aged 50.

Henry Lisle, M.D. Medical College of Ohio, Cincinnati; who retired from practice in 1874; died at his home in Chetopa, Kan., March 1, from senile debility, aged 89.

Wesley Newell, M.D. McGill University, Montreal, 1884; Trinity Medical College, Toronto, 1887; died at his home in Sarnia, Ont., February 11, from nephritis.

Grafton W. Seaton, M.D. Louisville Medical College, 1870; a veteran of the Civil War; died at his home in Indianapolis, March 25, from heart disease, aged 63.

George Washington Matteson, M.D. University of Buffalo, 1855; died at his home in Middleville, Mich., February 24, from senile debility, aged 88.

Henry D. Rosenberger, M.D. Hahnemann Medical College, Philadelphia, 1875; died at his home in Manheim, Pa., March 17, from cerebral hemorrhage.

Elijah Zimmerlee, M.D. Fort Wayne (Ind.) College of Medicine, 1891; died at his home in Markle, Ind., March 28, from pernicious anemia, aged 67.

Charles Alfred Hudson, M.D. Rush Medical College, Chicago, 1871; died at his home in Kenton, Tenn., March 18, from catarrhal cystitis, aged 64.

Oscar Sneed, M.D. University of Tennessee, Nashville, 1881; died at his home in McKenzie, Tenn., March 21, from disease of the stomach, aged 69.

John A. Meadows, M.D. University of Nashville, Tenn., 1872; died at his home in Bethel, Tenn., March 22, from pneumonia, aged 65.

Herman Mitchell Sorin, M.D. Jefferson Medical College, 1902; died at his home in Camden, N. J., March 22, from pneumonia, aged 30.

Louis Drucklieb, M.D. College of Physicians and Surgeons, New York City, 1886; died at his home in New York City, March 23, aged 54.

James Shadwick Spiller, M.D. University of Maryland, Baltimore, 1870; died at his home in King William, Va., March 12, aged 61.

Thomas J. Poole, M.D. Southern Medical College, Atlanta, Ga., 1898; died at his home in Jakin, Ga., from typhoid fever, aged 38.

James M. Watkins, M.D. Rush Medical College, Chicago, 1864; died at his home in Green Valley, Ill., March 22, aged 79.

Wallace Steward, M.D. Eclectic Medical Institute, Cincinnati, 1872; died at his home in East Clarendon, Vt., March 20.

William R. Pearce, M.D. University of Nashville, Tenn., 1876; died at his home in Como Depot, March 25.

Book Notices

NUTRITION AND DIETETICS. A Manual for Students of Medicine, for Trained Nurses, and for Dietitians in Hospitals and other Institutions. By Winfield S. Hall, M.D., Professor of Physiology, Northwestern University Medical School. Cloth. Price, $2. Pp. 315, with Illustrations. New York: D. Appleton & Co., 1910.

In the present-day tendency to reduce the treatment of disease to rational and more nearly physiologic forms, the question of diet of course assumes an important rôle. Practical works covering the whole field of nutrition and dietetics are not numerous. With this idea in view the present work has been prepared for the use of nurses, students and general practitioners. Though for the most part elementary in character, as it must necessarily be to meet the requirements of its purpose, yet it contains a mass of valuable information for the general practitioner who is sometimes not well posted in the matter of diet for his patients. The arrangement of the book is admirable. Part 1 describes foods and their different classes, their preservation and preparation. Part 2, on the use of foods in the body, without entering into the anatomy of the digestive tract, with which it assumes the reader is acquainted, enters pretty thoroughly into the physiology of digestion, absorption and assimilation of foods, and the getting rid of waste material, stating well the present views on these subjects. Parts 3 and 4 on diet in health and disease go into these matters in a practical way, treating of the measure of fuel values, the relation of fuel values to diet, giving average requirements under different conditions, and constructing daily menus for the child, the adolescent, the athlete, the person of sedentary occupation, etc. The chapters on infant feeding under normal and abnormal conditions by Dr. Brennemann are complete and practical and would add value to any work on pediatrics. The suggestions as to diet in the infectious diseases and diseases of the digestive and other systems are valuable, though the directions for feeding in the febrile stage of typhoid fever are not very definite or complete; but more attention is given to the feeding during convalescence, and full directions are given for feeding tuberculous patients. The book contains two appendices. One gives a classification of diets, the object of which is not apparent, and also a collection of recipes for preparing articles not usually given in the household cook book, which is of greater value. The other appendix, giving experimental tests in the chemistry of foodstuffs and in the experimental chemistry of digestion, is so brief that its value perhaps is not great. The book on the whole, is a valuable practical addition to the subject of nutrition and dietetics and will fill a distinct place in the physician's library.

GULICK HYGIENE SERIES. Book One: GOOD HEALTH. By Frances Gulick Jewett. Cloth. Price, 40 cents. Pp. 172, with illustrations. Book Two: EMERGENCIES. By Charlotte Vetter Gulick. Cloth. Price, 40 cents. Pp. 173, with illustrations. Book Three: TOWN AND CITY. By Frances Gulick Jewett. Cloth. Price, 50 cents. Pp. 271, with illustrations. Book Four: THE BODY AT WORK. By Frances Gulick Jewett. Cloth. Price, 50 cents. Pp. 247, with illustrations. Book Five: CONTROL OF BODY AND MIND. By Frances Gulick Jewett. Cloth. Price, 50 cents. Pp. 269, with illustrations. Boston: Ginn & Co., 1910.

This is a series of five text-books, for elementary school use, on physiology and hygiene of body and mind. The contents of each are indicated by the titles given above. The various volumes are graded in the matter to adapt them to the intelligence of the pupils, beginning with those of the fourth grade. *A narrative style is adopted and the matter is presented in* such a way as to hold the interest of the pupil. The object kept in view throughout the series is to aid in the establishment of hygienic habits in the young and to inculcate the avoidance of everything inimical to the health of body and mind of the individual. Facts are given on which assertions rest, particularly as they relate to the pupil's own life and environment. Many examples and accounts of the work of physiologists are given in investigating various questions, such as the effects of alcohol, tobacco, work, play, sleep, bad air, etc. The plan of the series is original and the information is obtained from authoritative sources. Examples are given of actual work done in sanitation, etc., in various cities, and the work is freely illustrated. While some criticism might be offered that the volume on "Emergencies" goes a little too far into the medical treatment of too many things, and that the

Ella Louisa Dexter, M.D. Woman's Medical College of Pennsylvania, 1881; a member of the Massachusetts Medical Society; the New England Ophthalmological Society; New England Hospital Medical Society; ophthalmologist to the New England Hospital for Women and Children, Boston, and to the Pope Dispensary; died at her home in Chestnut Hill, Boston, February 3, from rheumatic arthritis, aged 52.

Francis W. Patterson, M.D. Medical College of Ohio, Cincinnati, 1859; University of Maryland, Baltimore, 1889; a member of the Medical and Chirurgical Faculty of Maryland; and a surgeon in the Confederate service during the Civil War; for a time United States Inspector of contagious diseases of animals; died at his home in Catonsville, Baltimore, March 22, from senile debility, aged 74.

Alfred Nelson Beach, M.D. Bellevue Hospital Medical College, 1870; of Cooperstown, N. Y.; for several years surgeon on steamships running between San Francisco and China; at one time a member of the general assembly of New York, and for two years police surgeon of New York City; died in Thanksgiving Hospital, Cooperstown, N. Y., March 10, from general breakdown, aged 61.

Henry J. Beyerle, M.D. Philadelphia College of Medicine and Surgery, 1851; in 1862 a member of the Indiana legislature; for 45 years a resident of Goshen, Ind.; for more than 30 years editor and proprietor of the *Goshen Times;* for 4 years a member of the city council and for two terms a member of the school board; died at his home, March 24, from senile debility, aged 86.

James Mitchell Blackford, M.D. Starling Medical College, Columbus, Ohio, 1865; a member of the Ohio State Medical Association; mayor of Martins Ferry, Ohio, in 1906; a member of the local school board for nine years; charter member of the Martins Ferry Hospital Association, and a director of the institution; died at his home, March 26, from senile debility, aged 72.

George M. Bazemore, M.D. University of Nashville, Tenn., 1861; Bellevue Hospital Medical College, 1874; a member of the Tennessee State Medical Association; for many years local surgeon at Cleveland for the Southern Railway; chairman of the Cleveland Board of Health; died at his home, March 24, from heart disease, aged 76.

Jefferson L. Thorpe, M.D. Washington University, St. Louis, 1886; a member of the American Medical Association; local surgeon at Jefferson City for the Missouri Pacific, Missouri, Kansas and Texas, and Chicago and Alton railroads; a member of the Cole County Board of Health; died at his home, March 22, from uremia, aged 47.

Gardner Perry Pond, M.D. University of California, San Francisco, 1893; a specialist on diseases of the eye, ear, nose and throat of San Francisco for several years, and later a resident of Los Angeles county; formerly a member of the American Medical Association; died at his home in Pasadena, March 19, aged 41.

Hector H. Goodman, M.D. University of Maryland, 1881; for three years surgeon to the Baltimore Police Department; and for 25 years medical director of the Baltimore Life Insurance Company; died in the Hebrew Hospital in that city, March 20, from cerebral meningitis, following an operation on the nose, aged 60.

George M. Bell, M.D. University of Michigan, Ann Arbor, 1870; Chicago Medical College, 1871; Bellevue Hospital Medical College, 1875; for more than 40 years a practitioner of Benton Harbor, Mich.; died March 27, at the University Hospital, Chicago, from cancer of the spleen, aged 61.

Henry A. C. Poppenhusen, M.D. University of Pennsylvania, Philadelphia, 1894; formerly city physician of Washington, Mo., and coroner of Franklin county; died at his home in Hermann, March 14, from the effects of carbolic acid, believed to have been taken with suicidal intent, aged 41.

George W. Carroll, M.D. Kentucky School of Medicine, Louisville, 1868; of Smithsonia, Ala.; a member of the Medical Association of the State of Alabama and a Confederate veteran; fell from a train near Barton, Ala., March 26, and died from his injuries a short time later, aged 70.

Roland C. Irving, M.D. Bellevue Hospital Medical College, 1877; a member of the Broome County Medical Society and Binghamton Academy of Medicine; first lieutenant and assistant [illegible], First Infantry, N. G., N. Y.; died at the home of a fri[illegible]n, March 17, aged 50.

Elisha Fenn, M.D. Bellevue Hospital Medical College, 1887; a member of the Medical Society of the County of New York City; a member of the Medical Society of the State of New York; for several years a member of the Seventh Regiment; died in Roosevelt Hospital, New York City, March 26, from pneumonia, aged 57.

Thomas J. Norris, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1874; a member of the American Medical Association, and organizer of the first medical society in Macon county, Mo.; a Confederate veteran; died at his home in Macon, March 23, aged 72.

Albert V. Ellershaw, M.D. Jefferson Medical College, 1891; a member of the Medical Society of the State of Pennsylvania; and formerly a practitioner of Norristown and Bridgeport, Pa.; died at the home of his father in Blackpool, England, recently.

Leslie Teasdale Pease, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878; a member of the Illinois State Medical Society; a member of the council of Cisco; and a member of the school board for many years; died at his home, March 15, aged 57.

Harry Ellis Clemson, M.D. University of Maryland, Baltimore, 1894; a member of the American Medical Association; medical director of the Silver Cross Home for Epileptics, Port Deposit, Md.; died at his home, March 21, from heart disease, aged 37.

William Wallace Cole, M.D. Jefferson Medical College, 1869; a member of the Medical Society of the State of Pennsylvania; a veteran of the Civil War; assistant city physician of Pittsburg; died at his home, March 25, from heart disease, aged 67.

Samuel Jay Holliday, M.D. Northwestern Medical College, St. Joseph, Mo., 1882; a member of the American Medical Association; formerly of Pollock, Mo.; died at his home in Pennville, Mo., March 2, from lobar pneumonia, aged 53.

Joseph Dawson, M.D. Rush Medical College, 1885; Hahnemann Medical College of the Pacific, San Francisco, 1892; three years surgeon to the State Penitentiary, Joliet, Ill.; died at his home in Wauconda, Ill., March 24, aged 63.

John Blaine Laidley, M.D. Long Island College Hospital, Brooklyn, 1883; of Conway, Mass.; manager of the local interurban railway; died in the Franklin County Hospital, Greenfield, Mass., March 18, from influenza, aged 51.

William Henry Harrison Sharp, M.D. University of Pennsylvania, 1868; Bellevue Hospital Medical College, 1870; a veteran of the Civil War; died at his home in Muhlenberg, Pa., January 6, from diabetes mellitus, aged 69.

David H. Reed (license, years of practice, Ohio, 1896); for fifty-five years a practitioner of North Fairfield, Ohio; for two terms a member of the state legislature; died at his home in that place, March 21, from pneumonia, aged 78.

Welton O'Bannon, M.D. Washington University, St. Louis, 1875; a member of the Missouri State Medical Association; mayor of New Madrid, Mo., for sixteen years; died in St. Louis, March 16, from nephritis, aged 56.

Eli Perry Rainwater, M.D. University of Louisville, 1891; (license, Tenn., examination, 1889); a member of the Tennessee State Medical Association; died at his home in Trion, March 26, from heart disease, aged 55.

Frank Worman Myrick, M.D. College of Physicians and Surgeons, New York City, 1899; a member of the Medical Society of the State of New York; died at his home in Binghamton, March 21, from pneumonia, aged 34.

Edward Sutton, M.D. College of Physicians and Surgeons, New York City, 1888; a member of the Medical Society of New Jersey; died at his home in German Valley, January 5, from cirrhosis of the liver, aged 43.

Walter John Smith, M.D. Yale University, New Haven, 1878; for three years an apothecary in the United States Navy; died at his home in Olneyville, Providence, March 13, from heart disease, aged 53.

George Fame Gaines, M.D. Louisville Medical College, 1877; of Madison, Ind.; died in the Central Indiana Hospital for the Insane, Indianapolis, February 21, from the effects of an overdose of morphin, aged 54.

Perry E. Tayer, M.D. Detroit College of Medicine, 1907; of Adrian, Mich.; a member of the Michigan State Medical Society; died in the Adrian Hospital, March 25, from pneumonia, aged 27.

Joseph Howard Mansur, M.D. Medical School of Maine, Brunswick, 1890; a member of the American Medical Association; died at his home on Orr's Island, Maine, Dec. 27, 1909, aged 44.

James Harvey O'Rear, M.D. Rush Medical College, 1873; at one time a member of the American Medical Association; died at his home in Medford, Okla., March 13, from chronic nephritis, aged 73.

is shown by the programs received from the various county societies which are full of interest and show a strong tendency toward better educational methods in our societies.

It was also decided that every means possible should be used to present the programs and announcements to members in an attractive form, preferably in the shape of a periodical, issued as often as the affairs of the society would demand. We now have a number of county medical society papers called variously, *Reporter*, *Bulletin*, *Notes*, and *News*, published weekly, monthly or quarterly. These are exchanged between the various counties of the state and have in a short time been of the greatest value imaginable in closing the gaps between the various county organizations. Every little editor of us is pounding away for dear life, endeavoring to have a society above the average, and to edit a sheet that will be at least as good as the other fellow's, and to have in it material that will make his readers "sit up and take notice."

These Pennsylvania county secretaries also resolved that they would be good and prompt business men in the conduct of their affairs and would do all in their power to make the life of the state secretary a little easier. Further realizing that they were the agents of the state society all through the year, they felt that it was rather odd that their services could be dispensed with at the time of the annual session, and so, in their last conference they endorsed a resolution to amend the ordinances and by-laws of the state society so as to make the county secretary a member of the House of Delegates by reason of his office, as the county president is now. This amendment will be voted on at the next session of the society at Pittsburg.

The members of this conference are a forceful set of men, who are determined to boom their local organizations and to secure better organization of the medical profession generally, so as to improve the many conditions that make practice difficult or unpleasant. Marked developments and numerous innovations may be expected from this class of men and their organization.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month—Fourth Weekly Meeting

The Council on Pharmacy and Chemistry of the American Medical Association

History: Reasons for the creation of the Council; the U. S. P., the pharmacist, the practitioner of medicine, the manufacturing pharmacist, the ethical proprietary preparation, the nostrum.

Organization of the Council: The personnel of the Council, the professional standing of the members, what they have done in this particular field of work.

Objects: An inquiry into the composition and status of preparations offered to physicians, which are not found in the U. S. P., or standard text-books. The annual, "New and Nonofficial Remedies."

Rules Governing the Admission of Articles: Requirements as to formula, purity of ingredients, chemical tests, methods of advertising, claims of manufacturer as to ingredients, therapeutic properties, etc., name of article, etc. Admission of an article not an approval of it. Physician must decide as to therapeutic claims. Classification of articles examined and admitted. Reasons for rejections.

Results of the Work of the Council to Date: What may the practitioner do to aid the Council in this work? How may the county society help in this work? The relations existing between the members of this society and the local druggists. The practitioner and the detail man. The testimonial writer.

Publications of the A. M. A.: "New and Nonofficial Remedies," "The Pharmacopeia and the Physician," "Physicians' Manual of the U. S. P. and the National Formulary," "The Propaganda for Reform in Proprietary Medicine," various pamphlets.

Monthly Meeting

The Reasons for a More Exact Knowledge of Pharmacology on the Part of the Practitioner of Medicine.

The Difference Between the Ethical Proprietary and the Nostrum.

What the Practitioner and the County Society May Do to Aid the Council on Pharmacy and Chemistry.

Medicolegal

Sufficiency and Construction of Statute Authorizing Board to Revoke Licenses

The Supreme Court of Minnesota says that the complaint of the plaintiff in the case of Wolf vs. State Board of Medical Examiners (123 N. W. R. 1074) set forth that the board had caused a notice to be served on him to appear before it at a time and place stated and show cause why he should not have his license to practice medicine revoked. The ground stated in the notice was that he had been guilty of unprofessional conduct in that at divers times he had entered into business relations with a certain medical institute and had aided and abetted it in carrying on a questionable medical practice. The board, it was alleged, had not the capacity, qualification, or power to properly examine, pass on, or ascertain the facts as to whether the plaintiff had been guilty of immoral, dishonorable, or unprofessional conduct, or to summon, administer oaths, or compel the production of documentary evidence; "the ethics of the medical profession are vague and shadowy; there are a variety of medical schools represented on said board, all differing in their theory of ethics as well as on their medical theories; . . . they do not act under oath, and their action is wholly unrestrained, either by judgment, law, or conscience;" the board had fully determined in advance to revoke the license of the plaintiff without regard to the facts.

Section 2296 of the Revised Laws of Minnesota of 1905 provides in part that "the board may refuse to grant a license to, or may revoke the license of, any person guilty of immoral, dishonorable, or unprofessional conduct, but subject to the right of the applicant to appeal to the governor." It is obvious that this section is incomplete in itself. It is equally certain that the section must be construed together with other sections of the Revised Laws and general principles of law which are applicable. It is not true, as the complaint set forth, that the board is not required to take oath. The subscription of an oath is expressly required by section 2677. It is true that no notice nor form of notice is prescribed by section 2296. The gist of the power to revoke necessarily implies, however, the ability on the part of the board to prescribe legal forms. This section does not expressly confer on the board power of administering an oath. The deficiency, however, is fully supplied by section 2682. The nature and necessary construction of that statute confers that power. It is immaterial that its exercise is limited to questions of fact. No witness could properly swear to matters of law. While it is true that this section provides that such a board "shall have the power to administer such oaths as they may deem necessary to the proper discharge of their duties," it does *not provide* that they must. It was objected that the administration of an oath is therefore discretionary. If an instance were presented in which, as a matter of fact, the conclusion of the board rested on unsworn testimony, the question involved in that argument would be presented. No such state of facts was before the court in this case. The objection that the board has not the power to compel the production of documentary evidence is equally untenable. Section 4655 expressly confers the authority.

Objection was made to the form of notice served on the plaintiff by the board. That notice recited that it had been made to appear to said board that he had been guilty of unprofessional conduct. This he said demonstrated the prejudgement by the board of the merits of the case. Of this notice the trial court said: "From a lawyer's standpoint, the language employed (in the notice) might be improved, but it is simply a citation to answer before the board certain charges touching the professional and possibly the moral conduct of the plaintiff." This the supreme court thinks was the logical and proper construction. The notice was infelicitous, but not legally ineffective.

The constitutionality of the statute was attacked. This proceeding was commenced under the statute as it existed prior to the amendment thereof by chapter 474 of the General Laws of 1909; but it is clear that subsequent proceedings must conform to the statute as thus amended. The principal objection to the old statute was that it failed to provide a physician proceeded against for removal with an opportunity to review a possible removal before some tribunal authorized to hear and protect his rights, and hence deprived him of his liberty and property without due process of law. The new statute expressly provides for an appeal to the district court of the proper county on questions of law and fact, and thus answers every requirement of due process of law. It was intended to obviate the constitutional objection of the old statute. As it will govern further proceedings herein, it is unnecessary to determine the validity of the old statute. It is to be noted that the definition of the offense against professional propriety is in no wise altered. The change is one of procedure alone, and secures to the person proceeded against all his constitutional rights. The ability of the legislature to effect such change is beyond question. If the plaintiff should be removed, he would then have the right to review all proper questions on appeal. No adequate reason appears for granting him an injunction enjoining the board from proceeding further in the matter.

Physician Administering Anesthetic Not Liable from Not Protesting Against Operation Not Favored

The Supreme Court of Vermont says that the case of Lawson vs. Crane & Hall (74 Atl. R. 641) purported to be against the defendants as surgeons for not properly setting and caring for the plaintiff's broken leg. It appeared that at the plaintiff's house, some time after his injury, a Dr. Warren, assisted by a Dr. Burbank, broke over and set the plantiff's leg; Dr. Crane administering the anesthetic, but taking no other part in the operation. The plaintiff, in the opening of his case, called Dr. Crane as a witness, and asked him if he did not consider Dr. Warren's operation proper, and he said that he did not as it was performed, and in the place it was performed. He was en asked whether he made any objection to it or protest gainst it in the time of it, and he said that he did not. To this the defendants excepted, and the court holds that it was error, under the circumstances of the case, to admit the testimony objected to.

It appeared that a few days before that operation, the court goes on to say, that the defendants and Dr. Warren, who had been called for the purpose, met at the plaintiff's house and conferred as to whether anything or what further should be done to his leg. Dr. Crane advised that it be put into a plaster cast for a while, and then, if any further operation was to be performed, that the plaintiff be taken to some hospital where he could have expert care and attention. But it was finally determined at that conference to cut into the leg, break over the bone, and wire the parts together; and it was arranged that Dr. Warren should perform the operation, Dr. Crane consenting to administer the anesthetic, and in a few days the operation was performed accordingly, as before stated. Dr. Warren had exclusive charge of the case at the time of this operation, and directed everything done, and the charge of the case was with him ever after. There was no evidence tending to show that Dr. Crane was ever employed to have general charge of the case, but all the evidence tended to show that his employment was confined to the several occasions when he was called to assist.

Under such circumstances, it was error to admit the testimony objected to. Dr. Crane had already advised against any operation at the time and in the place it was performed; but his advice had been disregarded, and the operation was being performed contrary thereto, and was not subject to his control. Therefore he was not called on to object to, nor to protest against it, and hence no inference of approval of it could be drawn against him from his silence in that respect.

The plaintiff obtained a judgment in the lower court, but that is reversed and his petition dismissed, with costs.

Current Medical Literature

AMERICAN .

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

March 26

1 *Cerebrospinal Meningitis in An Infant Two Months Old. L. Fischer, New York.
2 *Some Dermatologic "Manias and Phobias." W. S. Gottheil, New York.
3 Surgical Hemostasis. H. G. Wetherill, Denver, Colo.
4 Typhoid Carriers. R. C. Rosenberger, Philadelphia.
5 A Further Suggestion Concerning the Relation of Life-Insurance Companies to the Longevity of their Policy Holders. B. Foster, St. Paul.
6 Surgical Procedures in the Military Service. F. T. Woodbury, Fort Assinniboine, Mont.
7 The Serodiagnosis of Syphilis. H. F. Swift, New York.
8 *A New Theory of the Origin of Papillitis (Choked Disc). J. Windbiel, Amsterdam, N. Y.
9 *Operation for Correction of Hammer-Toe. R. E. Soule, New York.

1. **Serotherapy of Cerebrospinal Meningitis.**—Fischer reports a case of meningitis in an infant two months old, in which the diagnosis was made by tapping the lateral ventricle, and calls attention to the fact that the intraventricular method of injection has not proved successful in cases previously reported. The disease had commenced with vomiting, anorexia and gastric discomfort. These symptoms were relieved by a laxative, but two days later the mother noticed twitching of the arms, stiffening of the neck muscles, rolling of the eyeball, restlessness and insomnia, and at times a sudden piercing cry as though the child were in pain. On the following day the child was admitted to the hospital and the diagnosis not being positive, expectant treatment was carried out for a few days. Lumbar puncture was done and 1 c.c. of turbid blood-tinged fluid was withdrawn. The fluid was examined microscopically for meningococci with negative results. Three other lumbar punctures resulted in dry taps, and as the symptoms of rigidity opisthotonos, fever, and twitching were marked it was decided to tap the lateral ventricles. Fifteen c.c. of turbid fluid containing pus were withdrawn from the right ventricle, smears from which showed intracellular Gram-negative cocci. The ventricles were then irrigated with normal saline solution at 105 F. The excess of fluid was allowed to drain out through the needle and 2.5 c.c. of serum were injected slowly into the ventricles. During the injection of serum the infant's color changed from a waxy pallor to a uniform red flush all over the body. One-half hour after the injection the infant remained flushed, perspired profusely, and frothed slightly at the mouth; otherwise the condition was good. The next day the ventricles were again irrigated with 40 c.c. of saline solution and 20 c.c. of serum injected. On the next day the general condition was poor, opisthotonos was marked, arms rigidly extended, and palms everted outward. Occasionally the child flexed the arms and legs at elbows and knees. It lay quietly although not asleep; when a strong light was held in front of the face the dilated pupils contracted. Perspiration was free. Even a light touch with a pencil caused a spasm of muscular contractions involving all the limbs, and later these contractions occurred every few minutes without outward irritation. The pulse was 140, but regular and of good tension. On the next day lumbar puncture in the fourth interspace resulted in dry tap. A second needle was then inserted in the third interspace, and 15 c.c. of serum were injected, about 3 c.c. of which returned through the first needle. Then 15 c.c. were injected through the first needle, 5 c.c. of which returned through the second; in all, the infant retained from 20 to 25 c.c. of serum. Better results on the whole were obtained from the intraventricular injections. Two days later, 15 c.c. were injected into the ventricles, although no ventricular fluid could be withdrawn. The infant gradually improved during the next month, and was discharged 2½ months after admittance in normal condition. The eyes were examined by two ophthalmologists and both reports showed no evidence of blindness, nor is there evidence of deafness. Throughout its illness the child was breast-fed.

2. **Leprosy.**—Gottheil reports cases to prove the correctness of the assertions that under the conditions here prevalent at least, the lepra infection, while intractable and progressive, is very feeble; that with ordinary non-ulcerative cases, at least

the danger to others is very small; that many of the patients can pass along for years of practically good health and capacity for work after they are infected; and that leprosy is probably not hereditary, though, of course, the children living with leprous parents are especially exposed to the contagion. In advanced cases, of course, the patients belong in the hospital; in milder ones a home which the patients could voluntarily seek should be provided; but to practically incarcerate patients in the early stages and make a public charge of them is required neither for the protection of the community nor by the patients' needs.

8. **Origin of Papillitis.**—This theory, first propounded by Schieck, is based on the pathologic and anatomic examination of fresh bases of papillitis in which the posterior bulb section including the opticus was examined through serial cuts or sections, thereby showing that the inflammatory theory (Leber-Deutschmann) cannot possibly be right. All fresh specimens showed signs of edema at the distal end of the optic nerve, but not the least evidence of an inflammation either in the optic nerve iself or in its sheaths. Neither can the Schmidtman lymph space theory solve the causation of choked disc, because the fluid in the vaginal space was found to be of too small amount to cause pressure on the nerve and strangulation of the blood vessels. Much less credibility has Deyl's theory of the compression of the central vein within the intervaginal space. And also that of Knapp with regard to compression of the vein in its course through the edematous dural sheath, since at both points the vein was found wide open. On the other hand, a very noticeable widening of the perivascular lymph channels in the axial strand was found in every case.

9. **Operation for Correction of Hammer-Toe.**—After the usual preparation of the foot for operation and after the Esmarch bandage has been applied, a skin incision, one and one-quarter inches long, is made at the outer aspect of the plantar surface of the toe, the center of which incision is at the flexed joint. The skin flaps are dissected laterally, sufficiently to expose the underlying structures. The incision is continued through the subcutaneous structures, being careful to expose the digital branch of the artery and the nerve and to prevent their injury while continuing the dissection down to the joint. The sheath containing the flexor tendons is then dissected free from the joint and held aside sufficiently to allow of the removal of the articulating joint surfaces with the chisel, observing due care to have sufficient flat surface at right angles to the shafts of the contiguous bones as a result of the arthrodesis. No bone suture is necessary. The subcutaneous structures are then allowed to fall back in place and are held by a few fine buried catgut sutures. The skin is closed with interrupted chromic gut and dressings applied. A plaster of Paris bandage, fixing the toes in hyperextension, making the flexor tendons tense, thus holding the bony surfaces of the phalanges operated on in close apposition and in straight line, is finally applied. After ten days, the plaster of Paris is split and the dressings are removed sufficiently to expose the field of operation. Then the dressings are restored and maintained in the original position for six weeks. The patient is allowed up on crutches after the first dressing.

Boston Medical and Surgical Journal

March 24

10 *The Present Status of Vaccine Therapy. W. Tileston, New Haven.
11 Local Anesthesia (Neumann) in Ear Surgery. J. J. Hurley, Boston.
12 *Tuberculosis of the Shoulder in Children. J. W. Sever, Boston.
13 The Hospital Dietitian. W. F. Boos, Boston.

10. **Present Status of Vaccine Therapy.**—According to Tileston in certain localized infections, particularly those due to the staphylococcus and tubercle bacillus, vaccine therapy has clearly proved its worth and stands on firm ground. In the general infections it has not so far shown results which are distinctly better than those with other forms of treatment.

12. **Tuberculosis of Shoulder in Children.**—In Sever's series there were 11 children who developed abscesses which required operations. There were 8 who needed one operation, 5 who had two, 1 who had three, and in 5 cases resection, partial or complete, was necessary of the head of the humerus. As is natural in these cases which required frequent operations, there was the greatest amount of bone destruction and they generally required excision of the head of the bone. The results are not encouraging, even with the best treatment. An ankylosed joint is usually the ultimate result. When the case involves much bone and cartilage, ankylosis always occurs, but when the type is synovial there may be some motion. Eleven cases showed no motion in the joint. In four of these there had been resection of the head of the humerus, 1 child had a moderate amount of motion following resection, and 6 who had not had resection showed motion varying from a very slight amount to about one-half normal.

Kentucky Medical Journal, Bowling Green

March 1

14 Organization's "Firing Line." V. E. Simpson, Louisville.
15 The Importance of the Secretary of the County Medical Society. W. W. Richmond, Clinton.
16 The Duties of the County Secretary. J. J. Rodman, Owensboro.
17 Medical Aspect of Gastric Ulcer. U. V. Williams, Frankfort.
18 Measles (Morbilli). T. A. Frazer, Marion.
19 The Tonsils During Childhood. A. O. Pfingst, Louisville.
20 Arteriosclerosis. J. W. Botts, Owenton.
21 Value of the Tuberculin Test in the Diary. G. P. Sprague, Lexington.
22 Indications, Contraindications and Dangers of Forceps in Obstetrical Work. O. B. Damaree, Frankfort.
23 Anemia. J. F. Garvey, Pleasureville.
24 The Antrum, Frontal and Mastoid Sinuses. V. E. Smith, Brooksville.
25 What the Medical Examiner Needs and How to Provide it. W. E. Grant, Louisville.
26 The Medical Examiner's Report. D. C. Morton, Louisville.
27 Extrauterine Pregnancy. J. Barnhill, Owensboro.
28 Diuretics. S. P. Anderson, Russelville.

March 15

29 Abortion. C. Farmer, Louisville.
30 *The Balsam-Oil Dressing in Surgery. A. L. Parsons, Louisville.
31 Woman as a Life-Insurance Risk. H. J. Farbach and J. G. Cecil, Louisville.
32 Indicanuria. F. C. Askenstedt, Louisville.

30. **Balsam-Oil Dressing in Surgery.**—The advantages of the balsam-oil dressing are stated by Parsons to be as follows: (1) There is continuous drainage of the wound surface; (2) wound secretions are not retained under an impervious scab, and the absorption of toxins is thus avoided; (3) bacteria are killed and eliminated from the field; (4) epithelium grows and is not rudely torn off at each dressing; (5) dressings are almost painless; (6) granulations are encouraged but do not become spongy; (7) irrigation is unnecessary; and (8) the wound does not require redressing oftener than at intervals of from 48 to 72 hours.

38. **Effect of Pregnancy on Laryngeal Tuberculosis.**—Laryngeal tuberculosis whether present at the time or developing during gestation, is increased very much during pregnancy. This development of the disease renders suffocation imminent, from the edema which often accompanies it. Tracheotomy is the only means for relieving the suffocation, and as it cannot always be done in time to save life, this fact has led to the acceptance of laryngeal tuberculosis as a positive *indication* for the artificial interruption of pregnancy.

Medical Fortnightly, St. Louis

March 10

33 Touring the Lands Where Medical Science Evolved. R. G. Eccles, Brooklyn.
34 The Indeterminate Stage. W. F. Waugh, Chicago.
35 Rupture of Membrana Tympani While Using a Telephone. A. F. Koetter, St. Louis.

Virginia Medical Semi-Monthly, Richmond

March 11

36 Cure of Uterine Prolapse. H. A. Royster, Raleigh, N. C.
37 Treatment of Certain Conditions Secondary to Lost Compensation. J. G. Nelson, Richmond.
38 *Effect of Pregnancy on Laryngeal Tuberculosis. C. R. Dufour, Washington, D. C.
39 Two Cases of Pellagra. J. L. Early, Saltville.
40 *Invagination of the Small Intestine into the Colon: Operation: Death. J. T. [illegible] D. C.
41 Hookworm in V[illegible] in Certain Piedmont Sections. J. A[illegible].
42 Importance of Diet in Nasopharyngeal Troubles. A. C. Palmer, Urbanna, Va.
43 A Case of Diphtheria. C. S. Webb, Bowling Green.

40. **Invagination of Small Intestine Into Colon.**—On opening the abdomen in a case of intussusception, Kelly found that the small intestine had inserted itself into the colon from the ileocecal valve to within an inch and a half of the anus. This was pulled out, but the part above the cecum was so necrosed and gangrenous that the head of the cecum and about four inches of the ileum had to be resected. This was done very quickly the child being removed from the table in as good condition as when he was placed there. His bowels moved soon after he had reached the bed. In spite of stimulation, he died the same night. The point of chief interest in the case is that the patient lived seven days after the intussusception occurred, and also to note with what ease an operation might have been done had the diagnosis been made earlier.

New York State Journal of Medicine, New York

March

44 *When to Operate in Appendicitis. J. A. Blake, New York.
45 *Appendicitis in Children. C. N. Dowd, New York.
46 *Masked Appendicitis. G. E. Brewer, New York.
47 Analysis of 1,411 Operations on the Appendix. C. A. McWilliams, New York.
48 *Conditions Simulating Appendicitis. A. B. Johnson, New York.
49 Interpretation of a Differential Leucocyte Count. T. H. Dexter, New York.
50 *Heredotuberculosis. J. L. Archambault, Cohoes.
51 Remote Symptoms from Intestinal Irritation in Infants and Children. C. A. Frost, Utica, N. Y.

44, 45, 46, 48. Abstracted in The Journal, Feb. 26, 1910, pp. 735, 736.

50. A similar article on this subject by the same author appeared in *Albany Medical Annals*, January, 1910.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

March

52 *Intramural Abscess of the Puerperal Uterus. J. A. Sampson, Albany.
53 Operative Technic in its Relation to Shock. C. M. Rakestraw, Savannah, Ga.
54 Treatment of Septic Abortion. E. W. Pinkham, New York.
55 Treatment of Inevitable and Incomplete Abortion. W. P. Pool, Brooklyn.
56 Legal Status of Criminal Abortion. A. C. Vandiver, New York.
57 *The Use of Chloroform in Treatment of Eclampsia. W. Ward, New York.
58 *Twenty-seven Cases of Latero-Lateral Anastomosis of the Ileum to the Sigmoid Flexure for Mucous Colitis. G. H. Noble, Atlanta, Ga.
59 *Suppuration of a Uterine Fibroid with Unusual Manifestations. E. A. Schumann, Philadelphia.
60 A Double Uterus with Laceration of the Cervices. G. E. Shoemaker, Philadelphia.
61 Fibroid Tumors Complicating Pregnancy and the Puerperium. W. Krusen, Philadelphia.
62 Primary Adenocarcinoma of the Body of the Uterus: Special Reference to An Early Diagnosis. C. N. Ballard, Oklahoma City, Okla.
63 Case of Pseudo "Viable Abdominal Pregnancy." S. C. Carson, Greensboro, Ala.
64 Ectro-Hemimelia of the Right Upper Extremity. J. F. Arteaga, Havana, Cuba.
65 Gastric Ulcer in Childhood. L. M. Bowes, Chicago.
66 Vaginitis. W. B. Meister, Brooklyn.
67 Pertussis. K. MacEvitt, Brooklyn.

52. **Intramural Abscess in the Puerperal Uterus.**—The reported authentic cases of intramural abscess of the puerperal uterus, according to Sampson, are few in number, probably not over 25, and, as many of them are briefly described, he does not feel warranted in drawing definite conclusions concerning the various phases of the subject. Nevertheless a general summary is not out of place. There are two distinct groups of cases: 1. Those in which the uterine abscess or abscesses are the only results of the puerperal infection present in the case, or if not, they are the most important ones and the principal cause of the patient's illness, as in the first two cases reported. The condition in this group exists as a distinct clinical entity. 2. Those in which the uterine condition is secondary in pathologic importance to others which may result from puerperal infection. There may be multiple abscesses in the organs and structures of the pelvis including the uterus, or the abscesses in the uterus may be overshadowed by some such condition as purulent peritonitis or thrombophlebitis, as in the last two cases reported. The uterine condition in this group loses its entity on account of the greater importance of the other conditions present. These cases are very rare, and are one of the results of puerperal infection. The number, size and distribution of these abscesses resemble closely those of uterine myomata. The patient gives a history of puerperal infection following labor or abortion, which has not cleared up, *i. e.*, has become chronic. The subjective symptoms may be slight. On the other hand, the general symptoms of infection and the local ones of pelvic inflammation may be severe. The general signs of infection are present; they vary in severity, but may be of a low grade. Diagnosis is not always possible, and it must be by exclusion. The following possible terminations of this condition present themselves and all have clinical confirmation: (1) rupture into the uterine cavity; (2) rupture into the peritoneal cavity; (3) extension into the retroperitoneal tissues; (4) rupture into the intestine; (5) rupture into the bladder; and (6) rupture of a cervical abscess into the vagina. The condition should be treated by surgical interference.

57. **Chloroform in Treatment of Eclampsia.**—The usual plan at the Sloane Maternity, New York, is to deliver as soon as possible, consistent with the mother's soft parts, after the occurrence of the first convulsion, if not before. If the cervix is soft and dilatable, an immediate *accouchement forcé* is done. If the surface is rigid and undilatable, preliminary softening by the Voorhees bag is used, the patient meanwhile being put on active anti-eclampsia treatment. There are here one or two periods when an anesthetic is required, and until last year chloroform was invariably used at the Sloane Maternity. The amount of the drug used varied with the individual case. For the introduction of the bag little is necessary, but the average patient is not easily controlled, her apparent strength is remarkable, and in some cases at least considerable chloroform is likely to be used. The records show that the average duration of the anesthesia for each of 15 patients was 43 minutes, even including in the average, several post-partum cases in which, with normal deliveries, but from one to five minims of chloroform was used for the control of the head and delivery over the perineum. To one patient chloroform was administered for 120 minutes, to another for 107, to another for 68, and so on. The charts also show that the patients who were in the worst condition on admission were those who required the longest anesthesia. Naturally these patients did not all receive chloroform to the surgical degree throughout the entire time, obstetrical anesthesia being all that was desired for at least a part of the time, but even so, it is evident that the anesthesia was prolonged and the amount of the drug used considerable. A further use of chloroform, as commonly used in the treatment of eclampsia, is for the control of the convulsions. Since March 15, 1909, there have been at the Sloane Maternity 12 cases of eclampsia in a series of 1,261 confinements. Any patient showing any symptoms of a toxemia, no matter how slight, has been treated without chloroform. Ward feels that by this method they have undoubtedly cut down the number of patients showing actual convulsions, *i. e.*, eclampsia. In these 1,261 women Ward has used no chloroform whatever in toxemic or eclamptic cases except in two patients early in the series. Neither of these patients was very toxic, as these cases go, and only small amounts were used for delivery. There have been no maternal deaths. A small series such as this means little, and similar results have been obtained under the chloroform treatment in a larger series of cases. Ether has been used for actual delivery or for any manipulations when an anesthetic has been required. These patients take ether as well as chloroform, and there is no difficulty in its use. Aside from the control of the convulsions, Ward uses the regular accepted treatment of the condition—emptying of the uterus as soon as consistent with the mothers' soft parts; veratrum viride, chloral, nitroglycerin, hot packs or hot-air baths, colon irrigations, forced fluids, etc. Looking at the convulsions as purely a symptom he makes no effort to control them on their own account, except as they are controlled by the general treatment which is designed partly to keep them in check, and at the same time, to stimulate as much as possible the eliminations.

58. **Latero-Lateral Anastomosis of the Ileum.**—All the cases observed by Noble on which this report is based were bad ones, and the patients were willing to submit to anything

holding out the least encouragement. With few exceptions, they were poorly nourished, anemic, neurasthenic subjects, often suffering from atonic dilatation of stomach, achylia, pyloric insufficiency, enteroptosis, and various pelvic lesions. They were in a state of invalidism, some having been confined to bed for from a few months to as long as two years, and were selected for the operation because they had been subjected to thorough trials of medical treatment and diet without material mitigation of symptoms.

Of the total number, 27, 18 now have evacuations of bowels from one to three times daily without laxatives. Of the remaining 9, 3 take laxatives, 2 use injections of either water or oil, 2 control motions by regulating their diet, of 1 no record has been received, and there is 1 other case too recent to record. About 75 per cent. of the patients are relieved of constipation sufficiently to avoid the use of medicines; 2 reported constipation; and 2 who acquired the habit of using injections before the operation have not allowed themselves an opportunity to see how the bowels will move without them. The relief of colicky pains has been remarkable; some individuals recovered in a few weeks and others gradually improved. Tenderness and soreness also disappeared after the effects of the operation cleared up. One of the most noticeable effects was the relief of gaseous distentions, some enormously distended abdomens, requiring anodynes to relieve pain almost daily, being promptly and effectually relieved by the operation. Only a few of the recent patients report any discomfort from this cause. Twelve patients pass no mucus at all, 10 very little, at times, 4 recent patients reported mucus much decreased, and 1 patient has not been heard from directly; 22 have been cured; 1 case is not reported. All have gained more or less in weight and strength. In 2 cases the appendix had previously been removed without affecting the colitis. In about half the remaining cases, appendectomy was done at the time of anastomosing intestines, but none of them showed any advantage or improvement over those in which the organ was left intact. The operation is based on the principle that mucous colitis is largely caused by constipation and putrefactive decomposition. The direct object of the anastomosis is to drain the most intensely infected section of the ileum, preventing its discharges into the cecum; for the amount of decomposition, irritation and absorption of toxins is in proportion to the quantity and character of material entering the colon. In the technic of the operation, the suture method is preferred, and the anastomosis is made as low down on the ileum and sigmoid as the two portions of the intestinal canal can be approximated without tension.

59. **Suppuration of a Uterine Fibroid.**—The point emphasized in this case by Schumann is that the constitutional disturbance and inflammatory reaction were due to a relatively minute focus of suppuration but one in which the pus was under high tension. A routine examination of the tumor and uterine appendages gave no hint of the cause of the disturbance, which was only made manifest by the opening of the small abscess cavity about the root of the polyp.

St. Paul Medical Journal

March

68 Occurrence of Deformity in Joint Disease. Its Importance in [illegible] Lesions and the Necessities for their [illegible] ainter, Boston.
69 [illegible] of Stomach Contents. T. W. Stumm, St. Paul.
70 Infant Feeding. R. N. Andrews, Mankato, Minn.
71 Technic of Appendectomy. W. E. Ground and H. T. Ground, Superior, Wis.

American Journal of Surgery, New York

March

72 Hemolytic Action of the Serum in Renal Disease: Is the Hemolysis of Prognostic Importance? V. Pleth, and V. W. Pleth, Seguin, Tex.
73 Pathologic Variations and Complications of Appendicitis. C. H. Goodrich, Brooklyn.
74 *Ionic Surgery in Cancer of the Mouth and Nose. G. B. Massey, Philadelphia.
75 Compound Posterior Dislocation of the Head of the Ulna. H. Neuhof, New York.
76 Operation for Fracture of the Femur. C. F. Barber, Brooklyn.

74. **Ionic Surgery in Cancer.**—Between 1893 and January, 1905, Massey employed ionic surgery in 14 cases of malignant growths within the mouth, 2 of which were operable in the ordinary sense and 12 inoperable, most of them hopelessly inoperable. Of these 4 patients were cured, including the 2 operable patients, and are well 5, 8, 9 and 12 years after treatment. Three died during or shortly after the operation, 2 were relieved for a long period of time, but finally relapsed, and 5 operations were failures to arrest the disease for any length of time.

New Mexico Medical Journal, Las Vegas

February

77 Hay Fever. J. W. Tinder, Roswell.
78 Milk-Sickness (Trembles, Slows or Alkali Poisoning). C. F. Montgomery, Roswell.
79 Treatment of Ileocolitis with Saline Transfusion. C. F. Beeson, Roswell.

Journal Experimental Medicine, New York

March

80 *Influence of Various Organs on the Catalytic Activity of the Blood. M. C. Winternitz and J. P. Pratt, Baltimore.
81 The Depressor Substance of Dog's Urine and its Disappearance in Certain Forms of Experimental Acute Nephritis. R. M. Pearce, New York.
82 *Peritoneal Patching of the Aorta. A. Carrel, New York.
83 *Remote Results of Replantation of the Kidney and the Spleen. A. Carrel, New York.
84 Physiology of the Immediate Reaction of Anaphylaxis in the Guinea-Pig. J. Auer and P. A. Lewis, New York.
85 An Attenuated Surra of Mauritius with Immunity Tests after Recovery. B. T. Terry, New York.
86 Pleomorphism and Pleobiosis of *Bacillus Bifidus Communis.* H. Noguchi, New York.
87 *Experimental Acute Nephritis: The Vascular Reactions and the Elimination of Nitrogen. R. M. Pearce, M. C. Hill and A. B. Eisenbrey, New York.
88 *Experimental Epidemic Poliomyelitis in Monkeys. S. Flexner and P. A. Lewis, New York.

80. **Influence of Organs on the Catalytic Action of the Blood.**—The conclusion of Batelli and Stern that catalase is not found in a single tissue but is produced by various tissues which support each other in preserving high catalytic activity of the blood is verified. After destruction of the function of the thyroid the catalytic action of the blood declines and after destruction of the function of the kidneys the catalytic action of the blood and the tissues declines. The thyroid is intimately concerned in preserving the high activity of the blood and this is of interest because of the influence of this gland on physical and mental activity.

82. **Peritoneal Patching of the Aorta.**—Carrel found that by using a patch of peritoneum the aortic wall can regenerate itself so perfectly as to become absolutely normal, even though the new wall is composed of tissues different from the normal tissues of the aorta, yet the morphology was not greatly modified.

83. **Remote Results of the Replantation of the Kidney and Spleen.**—Carrel is now able to replant (in the same animal) the kidney or spleen on the renal or splenic vessels easily and safely. After the operation the animals remain generally in good health. Thus the left kidney of a dog was removed and perfused with Lockes' solution and replanted, the circulation being reestablished after an interruption of 50 minutes. Fifteen days afterward the right kidney was removed and the animal has remained in perfect health up to the time of this report, that is to say 23 months; hence the operation does not interfere with the function of the organs, at least within the time specified. In 4 other experiments three successful results were obtained. In one case the spleen disappeared. In the other 3 experiments the anatomic conditions of the replanted kidney or spleen were found entirely normal, when removed a long time after the operation. Several dogs, whose left kidneys were replaced some months by the left kidneys from other dogs are now living and in good health. Some time later it is proposed to endeavor to determine, if possible, the value of the transplantation of organs.

87. **Experimental Acute Nephritis.**—By the study of experimental nephritis with physiologic and anatomic methods, types in which either tubular or vascular changes predominate may be distinguished. Potassium chromate, uranium nitrate and corrosive sublimate cause extensive tubular injury without evidence of vascular injury, while arsenic and cantharadin produce but little injury to the tubules but cause

anuria. Physiologically, these two types represent tubular and vascular nephritis. In the tubular form the output of nitrogen is considerably diminished. In the vascular nephritis the nitrogen elimination is greatly increased.

88. **Experimental Epidemic Poliomyelitis.**—In this article Flexner and Lewis give a connected and detailed statement of their work on *experimental poliomyelitis in monkeys. Most* of the results obtained have been reported in a preliminary way from time to time in The Journal (1909, lii, 1639, 1913, 2095; 1910, liv, 45, 535). This study has yielded a large number of important facts bearing on the disease in man. The filterable character of the virus has been discovered and many of its properties have been ascertained. Some observations in regard to immunity have been made, as well as in regard to the clinical and pathologic peculiarities of the disease. A basis has been secured for the development of preventive measures.

Maryland Medical Journal, Baltimore

March

89 The Ebb and Flow of Hypnotism. H. A. Kelly, Baltimore.
90 The Freund-Wertheim Operation for Complete Prolapse of the Uterus. J. M. Hundley, Baltimore.
91 Commercial Value of an Early and Correct Diagnosis. W. J. Todd, Mt. Washington, Md.
92 Jenner (1749-1823). H. M. Cohen, Baltimore.

Cleveland Medical Journal

March

93 Use of the Hydrostatic Dilator in Obstetrics. A. J. Skeel, Cleveland.
94 Clinical Application of the Tonics. R. Pollock, Cleveland.
95 Ankylostomiasis. M. Coplan, Cleveland.
96 **Traumatic Neuroses from the Legal Point of View.* G. A. Boone, Cleveland.
97 Ovarian Cyst Weighing 62 Pounds Removed from a Patient aged 80: Recovery. E. C. Brush, Zanesville, Ohio.
Microphthalmus: Exhibition of Specimen. E. G. Rust, Cleveland.
*Mercurial Treatment of Pulmonary Tuberculosis. J. Placak, Cleveland.
100 **Analysis of the Principal Causes of the Infant Mortality of* Cleveland, 1908 and 1909. A. F. Furrer, Cleveland.

96. **The Traumatic Neuroses.**—Boone's observations covering nearly 17 years, have been in connection with the claim and legal departments of liability insurance companies, street and steam railroads, and in the cases in which traumatic nervous disorders furnished the basis of claims, he estimates that at least 95 per cent. *of the claimants fully recovered* within a reasonable time after their claims have been disposed of.

99. **Mercury in Pulmonary Tuberculosis.**—Placak's experience with the succinimid of mercury has been limited to about 20 cases, yet this number has been sufficient to convince him that *mercury will fall by the wayside as many so-called specifics in tuberculosis* have done in times gone by. Many of the patients after a length of time claimed they received no benefit and on account of the pain refused to take the injections.

100. **Infant Mortality of Cleveland.**—*The infant mortality* in Cleveland, according to Furrer, is approximately 25 per cent. of the total death-rate (1907, 1908, 1909). The so-called severe infectious diseases play such a small part in the causation of this mortality that they are comparatively unimportant, scarlet fever, whooping cough, diphtheria and tuberculosis, together causing but 50 deaths out of 1,800. Diarrhea and enteritis, convulsions and "early infancy," or in other words the gastrointestinal diseases, were directly or indirectly responsible for about 1,200 deaths, which represent two-thirds of our total infant mortality. Furrer urges that the present classification of diseases pertaining to *infants* as reported in city mortality statistics should be revised.

Louisville Monthly Journal of Medicine and Surgery

March

101 Gastroenterostomy. L. Frank, Louisville.
102 Prophylaxis of Pellagra. C. H. Lavinder, Washington, D. C.
103 Picrotoxin. H. H. Redfield, Chicago.

American Journal of Physiology, Boston

March

105 *Decompression of the Ammonia-Destroying Power of the Liver After Complete *Thyroidectomy.* A. J. Carlson and C. Jacobsen, Chicago.
106 Action of the Proteins of Blood on the Isolated Mammalian Heart. L. W. Gorham and A. W. Morrison, Baltimore.
107 Blood-Pressure of the Sheep. M. Dresbach, Ithaca, N. Y.
108 *Influence of the Removal of Fragments of the Intestinal Tract on the Character of Nitrogen *Metabolism.* II. Removal of Small Intestine. A. Carrel, G. M. Meyer and P. A. Levene, New York.

105. **Ammonia-Destroying Power of the Liver.**—Carlson and *Jacobson experimented on thyroidectomized* cats and foxes to determine the influence of removing the thyroid and parathyroids on the metabolism of ammonia by the liver cells. In animals treated in this way when symptoms of excitation and depression are exhibited, the blood contains more ammonia than that of normal animals and the livers show a marked depression in the ammonia-destroying power as compared to the liver of the *normal* animals. In animals which show no symptoms these changes do not appear. The increase in the ammonia content of the urine and blood *after complete* thyroidectomy, is due, at least in part, to liver depression rather than to acidosis *independent of the liver. The authors* suggest that the detoxication function of the parathyroid is *probably due to influence on the liver and other organs* rather than to neutralization processes *in* the glands themselves.

108. **Removal of Fragments of the Intestinal Tract.**—Carrel, Meyer and Levene continued their experiments to determine the functions of the different segments of the digestive tract by *removing the small intestine. They found that there was a diminution of the absorption of ingested proteins and of* leucin, but there seemed to be no disturbance of the power of assimilation and retention of the absorbed protein. They conclude, *therefore, that the stomach and not the intestines is the organ principally concerned in the function of protein* assimilation.

American Journal of Orthopedic Surgery, Philadelphia

February

109 Malformations. A. Thorndike, Boston.
110 Multiple Hand and Foot Deformities in the Third, Fourth, Seventh and Ninth Children of the Same Family, the others Being Normal and the Parents Normal. DeF. Willard and B. L. Singer, Philadelphia.
111 Some Myogenous Types of Rigid Spine. G. R. Elliott, New York.
112 *Etiology of Hallux Valgus or the Intermetatarseum. J. K. Young, Philadelphia.
113 Subluxation of the Third Cervical Vertebra. E. W. Ryerson, *Chicago.*
114 Traumatic Lesions of the Atlas and Axis. S. J. Mixter and R. B. Osgood, Boston.
115 *Relation of Posture to *Human Efficiency* and the Influence of Poise on the Support and Function of the Viscera. J. E. Goldthwait, Boston.

112. Abstracted in The Journal, Aug. 7, 1909, p. 479.

115. Published in the *Boston Medical and Surgical Journal.* Dec. 9, 1909, and abstracted in The Journal, Dec. 25, 1909, p. 2177.

Texas State Journal of Medicine, Fort Worth

March

116 The Public School *and* the Prevention of Tuberculosis. J. S. Lankford, San Antonio.
117 Causes of [illegible] J. S. Turner, Dallas.
118 Optical [illegible] Reference to Leucoma. E. L. Burtor, [illegible]
119 *Amber-Tinted Lenses for the Relief of Asthenopia. H. L. Hilgartner, Austin.
120 *Surgical Relief of Bright's Disease. W. Cantrell, Greenville.
121 Sanitation. W. H. Blythe, Mount Pleasant.

119. **Amber-Tinted Lenses for Asthenopia.**—The use of amber-tinted lenses *in ten cases, by Hilgartner,* has been satisfactory, with one exception, a case of extreme hysteria.

120. **Surgical Relief of Nephritis.**—Cantrell has faith in surgical effort for the relief of Bright's disease based on some little work. He mentions 19 patients, including a number who were operated on for floating kidney, and who presented tube casts and epithelium. He has lost only one of his patients and this loss occurred nearly two years after the *first* operation. In this case he was induced to make a second attempt, hoping that he might be able to relieve the distressing symptoms. The patient did not die immediately after the operation, but several weeks later. Cantrell's entire list of *living* patients is greatly improved. They are all well pleased with the effort, and while Cantrell cannot claim that any one of them is cured, he is convinced beyond a doubt that they are all greatly relieved, and this relief, he says, is well worth the effort which has been made.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

March 12

1 *Causes and Treatment of Functional Dyspepsia. D. Drummond.
2 *Reflex Pain in Diseases of the Abdominal Viscera. A. E. Maylard.
3 How to Operate for Appendicitis. R. P. Rowlands.
4 *The Effect of Abdominal Compression in a Case of Very Rapid Heart. W. Gordon.
5 *A Red Line on the Gums. G. A. Stephens.
6 The Cerebellum and its Diseases. J. S. R. Russell.

1. **Causes and Treatment of Functional Dyspepsia.**—Drummond is so convinced of the practical importance of hunting out the inducing cause in each case of indigestion with a view to its removal, that he regards investigation of the secretory activity of the stomach, followed by prescription of appropriate diet or acid and antacid remedies, as being valuable, no doubt, for giving relief, but only too often insufficient for a cure. Foremost among perplexing and often highly elusive causes of gastric dyspepsia stand mental and nervous disturbances, he says. Practice among all classes of society furnishes many examples which belong to this group, and the fact will at once occur that one of the most useful of therapeutic measures in stomach cases is rest in bed.

2. **Reflex Pain in Disease of Abdominal Viscera.**—Without attempting to differentiate clinically between the lesions causing pain in the same spot, Maylard gives a sort of classified list of the diseases which may be expected to cause reflex pain in certain definite areas. Thus, (1) perforation of gastric or duodenal ulcer, rupture of gall-bladder and acute hemorrhagic pancreatitis cause acute pain to be felt in the epigastrium; (2) perforation of the appendix or of the small intestine, ruptures, strangulations and obstruction from various causes, embolism or thrombus of the mesenteric vessels, etc., cause acute pain to be felt in the region of the umbilicus; and (3) rupture in tubal affections including extrauterine pregnancy, causes acute pain to be felt in the hypogastrium. He emphasizes the fact that while diseases of the abdominal viscera may give rise to reflex pain located in one or other of the anatomic regions into which the abdomen is artificially divided all reflex pains experienced in these particular regions do not necessarily signify diseases of the abdominal viscera.

4. **Abdominal Compression in Tachycardia.**—Abdominal compression is a recognized method of treatment in paroxysmal tachycardia and in cases cited by Gordon it appeared to have been the chief means of saving life. April 3, a man, aged 68, was thrown down by a large motor car which backed on to him. A certain amount of general shock was sustained. The man was not neurotic. His pulse on the day of the accident was 100, and between April 3 and 10 it varied between 100 and 80. Two days after the accident he complained of severe abdominal pain and vomited three times. On April 9 he began to complain of an aching pain over the heart, with a good deal of flatulence and abdominal distention, and his pulse became rather weak, intermittent and irregular. The heart was apparently of normal size, free from murmur, but with rather feeble sounds. There was slight pulmonary emphysema, but no other lung trouble. The urine was normal. A mixture containing bismuth, a sodium salt, carbolic acid, and nux vomica was ordered and a simple aperient. The pulse was then very small, irregular and intermittent, running about 100, and the patient was pale and perspiring. There was no dyspnea, no distention of the veins in the neck, no sign of cardiac dilatation. There was no murmur or friction to be heard, only rather feeble sounds. He still complained of aching over the heart.

Under treatment the pulse improved somewhat, remaining, however, very intermittent. Next day it rose further in frequency, and at 2 p. m. was running at 144. On April 13, the right saphenous vein became thrombosed. The pulse was then counted at 180. Next morning it was counted at 74. Cheyne-Stokes breathing was very marked on April 14, and occurred occasionally for several days. From this time until April 21, a very serious condition was maintained, the rate of the pulse varying greatly from time to time, but being usually excessive, and often very rapid. At no time was there dyspnea, cardiac dilatation or murmurs, distention of veins or edema, except in the thrombosed leg. During full inspiration the feeble rapid pulse became absolutely obliterated. Gordon then decided to try the effect of abdominal compression, and a stout flannel binder was tightly applied over the entire abdomen at 11:40 a. m. No other change was made in the treatment. The pulse returned to an ordinary rate, 72. The effect of the binder, Gordon thinks, can best be explained by its effect on the overcharged splanchnic circulation.

5. **Red Line on Gums.**—The typical lead line, according to Stephens, is seen to be just under the surface of the edge of the gum, and situated in the papillæ, and under a magnifying glass presents an interrupted appearance. These papillæ in some cases become enlarged almost to the extent of rupture. About two years ago, when examining the men at a factory in his district where lead ore is handled, Stephens was particularly struck with the fact that a large percentage of their gums showed a distinctly red line. This red line is, in his opinion, due to an enlargement of the papillæ at the edge of the gum, and peculiarly enough, was seen in lads who had been only from 14 to 28 days at the works, as well as in the outside men, such as masons, whose contact with fumes occurred only when the latter were diluted. The conclusion that Stephens arrives at from such fact is that the so-called lead line is no proof of lead in the system, but that it appears in workers whose gums have been irritated by particles other than lead.

Lancet, London

March 12

7 *Angina Pectoris. W. Osler.
8 The Medical Examiner in Life Assurance. H. W. G. MacKenzie.
9 *Clinical Significance of Gastric Hypersecretion and its Connection with Latent Diseases of the Appendix. W. S. Fenwick.
10 *Appendicular Gastralgia. H. J. Paterson.
11 The Commoner Forms of Chronic Rheumatism (Fibrositis) and their Treatment. A. P. Luff.
12 Enteric Intussusception with Henoch's Purpura. F. W. Collinson.
13 *Treatment of Vomiting. J. Snowman.
14 Reform of Medical Poor-Law Relief. C. T. Parsons.
15 Maison Barlier. H. Mac-Naughton-Jones.

7. **Angina Pectoris.**—Osler has notes of 268 cases in all—231 men, 37 women. If we recognize a mild neurotic or pseudoneurotic, and a grave organic or true form, there were of the former 225, and of the latter, 43. Osler has not counted *les formes frustes* unless a patient had subsequent severe attacks. Of the severer form of 225 cases, there were only 14 women. On the other hand, of the minor type, of 43 cases there were 23 women. The age incidence is late, the largest number of cases occurring in persons over 50. Of the 612 deaths in England and Wales, only 36 occurred between the ages of 35 and 45; while between 45 and 65 there were 291 deaths. In Osler's list the age was much the same. There were under 30 years of age, 9; between 30 and 40, 41; between 40 and 50, 59; between 50 and 60, 81; between 60 and 70, 62; between 70 and 80, 13; and above 80, 3. In women the age incidence is, on the whole, a little lower than in men.

A point that stands out prominently in Osler's experience is the frequency of angina pectoris in physicians. Thirty-three of his patients were physicians, a larger number than all the other professions put together. Only 7 were above 60 years of age, one a man of 80, with aortic valve disease. The only comparatively young man in the list, 35, was seen nearly 20 years ago in an attack of the greatest severity. Worry and tobacco seem to have been the cause. He has had no attack now for years. Two cases were in the fourth decade, 13 in the fifth, and 11 in the sixth. Neither alcohol nor syphilis was a factor in any case; of the 26 patients under 60, 18 had pronounced arteriosclerosis, and 5 had valvular disease. In a group of 20 men, every one of whom Osler knew personally, the outstanding feature was the incessant treadmill of practice, and yet, every one of these men had an added factor, worry.

So far as symptoms are concerned, Osler's cases fall into three groups (1) *les formes frustes;* (2) mild; and (3) severe.

1. The mildest form "*les formes frustes*" of the French, with substernal tension, uneasiness, distress, rising gradually to positive pain, is a not infrequent complaint, one, indeed, from which few escape, is associated with three conditions. Emotion is the most common and the least serious cause.

2. Under the mild form, angina minor, come 43 cases. Osler has grouped under these, the neurotic, vasomotor and toxic forms, the varieties which we formerly spoke of as false or pseudoangina. The special features of this variety are: the greater frequency in women, the milder character of the attacks, and the hopeful outlook.

3. Severe angina, angina major, is represented by 225 cases, of which 211 were in men. Two special features here are, existence in a large proportion of all cases of organic change in the arteries and liability to sudden death.

9. Clinical Significance of Gastric Hypersecretion.—Hypersecretion of gastric juice, according to Fenwick, invariably depends on an organic lesion, which usually takes the form of a chronic ulcer of the stomach or duodenum, calculus in the gall-bladder, or latent disease of the appendix, although it is probable that future investigations will prove that pancreatic calculus, tubercle of the cecum, and carcinoma of the appendix are also capable of producing it. Of the last named, one case has already come under his observation. This disorder of secretion is merely the physiologic expression of a reflex irritation of the gastric glands, and is therefore not entitled to be regarded as a disease. The continuous flow of hyperacid gastric juice, whatever be its cause, always excites severe inflammation of the stomach, and is liable to be followed by ulceration of that viscus or the duodenum. This secondary ulceration is at first superficial in character and may not be demonstrable on examination of the exterior of the stomach. Minute hemorrhagic erosions capable of producing alarming hematemesis and melena are usually associated with and caused by this abnormality of the gastric secretion. Latent disease of the appendix as a result of former acute inflammation is accompanied by a peculiar form of digestive disturbance. In this condition, subacidity of the gastric juice with an absence of free hydrochloric acid is the rule.

With the exception of hemorrhage, all the symptoms that are regarded as pathognomonic of duodenal ulcer are in reality due to the gastric hypersecretion that always accompanies this lesion. It follows, therefore, that a severe example of hypersecretion may, as a rule, be safely diagnosed as a case of duodenal ulcer. Contrary to the usual belief, carcinoma of the pylorus is sometimes accompanied by extremely well-marked hypersecretion. In such cases the morbid growth develops with extreme rapidity and violent hemorrhages, due, possibly, to digestion of the tumor, are exceptionally frequent.

10. Appendicular Gastralgia.—Paterson holds that appendicular disease may give rise to symptoms which closely mimic the supposed symptoms of gastric and duodenal ulcer. The prominent symptom is epigastric pain or severe discomfort after food; in many cases there are sour eructations, vomiting, and even hematemesis and melena. The radiation of epigastric pain to the lower abdomen is suggestive of appendicular trouble. Gastric analysis reveals, in some cases, hyperchlorhydria, in others a normal amount of free hydrochloric acid, in others a marked diminution or absence of free hydrochloric acid. As a rule, there is an increase of the volatile acids, and in some cases evidence of hypersecretion. Some cases of hypersecretion or acid dyspepsia and many cases of supposed gastric or duodenal ulcer are due to latent appendicular disease.

The evidence that the gastric symptoms are due to appendicular disease is threefold: (a) the majority of patients are cured by appendectomy; (b) the influence which appendectomy has on the gastric contents; and (c) the frequency of a previous history of gastric symptoms in those who have an attack of acute appendicitis. The symptoms are probably the result of intestinal toxemia due to intestinal stasis. The effect of gastric secretion is, in the early stages, possibly due to pyloric spasm, but more probably to some influence of the appendix on gastric secretion. Appendicular gastralgia is apparently more common in women than in men.

The important lessons to be learned from these cases are as follows, Paterson states:

1. No operation should be performed on the stomach except when a definite organic lesion of the stomach or duodenum exists. Gastrojejunostomy will not cure appendicitis.
2. In all operations for supposed gastric or duodenal ulcer, the conditions of the appendix should be carefully investigated.

13. Treatment of Vomiting.—In the treatment of vomiting Snowman says that the first point to determine is whether it is an incidental symptom of an acute illness or a cardinal feature of some chronic disease. The ordinary therapeutic measures available for treatment of vomiting are numerous and somewhat conflicting in their variety, a testimony to the failure which so often attends their administration. Nausea may be relieved occasionally either by sips of extremely hot water or by sucking fragments of ice. This contrast is still further seen in the circumstance that sometimes a tight abdominal binder will stop nausea, whereas at other times this very unpleasant sensation yields when the clothing around the abdomen is loosened. Perfect recumbency in the horizontal position should be maintained, and such local applications to the epigastrium as sinapisms, blisters or leeches are frequently very useful. The washing out of the stomach with weak boric lotion or alkaline solutions is an excellent method of treating the persistent vomiting in gastric dilatation or the gastric catarrh of infants.

Snowman in discussing the treatment says that the favorite drug for vomiting is bismuth in one of its various forms. Cerium oxalate probably acts in the same way as bismuth but nothing definite is known of its pharmacology. It has acquired a reputation in the treatment of vomiting of pregnancy, but clinical experience generally fails to confirm it. Creosote, iodin and carbolic acid may be grouped together as a series of drugs which allay vomiting when suitably employed. Aconite has some vogue in the treatment of vomiting, but it must be given in large doses. Chloretone, he believes, is an effective remedy when some painful local disease such as cancer of the stomach, is responsible for the vomiting. One-third of a grain of cocain will occasionally put a stop to a bout of vomiting, and is one of the most effective remedies available for seasickness. Hydrocyanic acid is another drug with a reputation in gastric vomiting, but if it acts it does so forthwith, and if it proves to be unsuccessful at first it is merely a waste of time to persist with it. Opium, he declares, is the most valuable remedy for vomiting which is persistent and exhausting, and then it must be given in the form of a hypodermic injection of morphin.

Medical Press and Circular, London

March 2

16 Conditions of the Prostate Associated with Urinary Obstruction. W. S. Handley.
17 The Negro and Negroid Races. A. Keith.
18 Technic of the Operative Treatment of Fractures of the Femu R. L. Joynt.
19 Effects of Neglected Constipation in School Girls. F. Hern man-Johnson.
20 Influence of the Addition of Calcium Salts on the Coagulabilit of the Blood *in Vitro.* B. J. Collingwood.

Clinical Journal, London

March 2

21 The Manifestations of Eyestrain. E. Clarke.
22 Dysphagia. L. B. Rawling.
23 Practical Hints for Consumptives. M. Paterson and F. Shrubsall.

Journal of Tropical Medicine and Hygiene, London

March 1

24 The Guinea-Worm in Domesticated Animals. R. T. Leiper.
25 Diseases Encountered During Ten Years' Medical Work o the Shores of Lake Nyasa. R. Howard.
26 Native Sanitation in Sierra Leone. H. E. Arbuckle.

Archives des Maladies du Cœur, etc., Paris

February, III, No. 2, pp. 65-144

27 *Edema of the Lungs with Paroxysmal Increase in the Blood Pressure. (Remarques sur l'œdème aigu du poumon ave hypertension artérielle paroxystique.) K. Petren and G Bergmark.
28 *The Arterial Pressure and the Suprarenal Glands in the Tuberculous. A. Sézary.
29 *Paroxysmal Tachycardia and Treatment by Induced Vomiting (Tachycardie paroxystique et médication vomitive.) Savy.
30 Exosmosis of Salts in Blood Corpuscles and Hemolysis. (L diffusion des sels globulaires et l'hémolyse.) J. Troisier.

27. A similar article by the same authors was abstracted in THE JOURNAL, Feb. 5, 1910, page 500.

28. **Arterial Pressure and the Suprarenal Glands in the Tuberculous.**—Sézary has been examining the condition of the suprarenals in tuberculous patients whose arterial tension had been systematically recorded during life. His findings fail to sustain the assumption that the lower blood pressure is always the result of lesions in the suprarenals. The low tension at first is probably due to the diffusible toxins of the tubercle bacilli; and it is not until later that the suprarenals become incompetent. In three cases he found a relatively high blood pressure, although autopsy showed complete destruction of the suprarenals. A concomitant nephritis in all these cases was probably responsible for the high arterial tension, but the tension was lower in these patients than in the non-tuberculous who had the same kind of kidney lesions, and there was thus relative hypotension.

29. **Induction of Vomiting in Treatment of Paroxysmal Tachycardia.**—Savy refers to a few cases on record in which an attack of paroxysmal tachycardia was arrested by accidental vomiting after which the patients learned to induce vomiting systematically to arrest the attack. The pulse in one case dropped in thirty seconds after the vomiting from 200 to 94, from 209 to 96, and from 200 to 80. The means used to induce vomiting seemed to be immaterial—tepid water, tickling the throat, ipecac, etc.—but ipecac generally proved most convenient, two or three tablespoonfuls of syrup of ipecac always answering the purpose. Laache's patient was able to arrest the milder attacks by holding his breath or applying heat to the precordial region. Apert's patient was also able occasionally to arrest an attack by holding his breath. Others have reported the effectual action of a fright, of prolonged inspiration, of an automobile accident, compression or faradization of the pneumogastric nerves—all acting in the same way by direct or indirect excitation of the pneumogastric nerve or its centers. The effect of emetics probably belongs in this category, but their action is much more reliable and effectual than any of the other measures, while they can be more systematically applied in treatment. He has been unable to find any cases on record in which the attack was arrested by vomiting occurring spontaneously.

Presse Médicale, Paris

February 26, XVIII, No. 17, pp. 145-152

31 Case of Exstrophy of the Female Bladder; Five Operations before Age of 25. G. Marion.
32 Technic for Operative Treatment of Anal Fistula. (Extirpation large des fistules à l'anus.) L. Chevrier.
33 Cysts in the Prostate. F. Legueu and H. Verliac.

March 2, No. 18, pp. 153-160

34 *Proper Diet in Kidney Disease. (Régime alimentaire dans les affections du rein.) G. Linossier and G. H. Lemoine.
35 Radium Treatment of Cancer of the Tongue. (Radiumthérapie du cancer de la langue.) Fominici and D. Martel.

March 5, No. 19, pp. 161-168

36 Vaccine Treatment of Gonococcus Infections. C. Jarvis.
37 Suprarenal Treatment. (Emploi de l'adrénaline en thérapeutique.) O. Josué.

34. **Injurious Effect on the Kidney of Imperfectly Cooked Albuminous Food.**—In the experiments on rabbits and guinea-pigs reported the animals were injected subcutaneously with a maceration of meat in one-half part water, or with meat juice, egg albumin or milk, the aim being to determine the effect on the kidneys of albumin of animal origin. The effect was estimated by the albuminuria which almost invariably followed, its promptness, intensity and duration paralleling the congestion and other evidences of injury of the kidneys found on dissection of the animals. By this technic the influence of the digestive apparatus was eliminated. The results seem to demonstrate that raw animal albumin has always a decidedly injurious action on the kidneys, but this injurious action is nullified if the albumin has previously been in sufficient contact with the gastric juice. When the albumin is cooked, the gastric juice has to act on it for some time before it can be absorbed, and thus it is rendered non-toxic for the kidneys; raw albumin is absorbed too rapidly for it to feel the action of the gastric juice. The practical conclusions of the research are that uncooked albuminoid foods should never be taken by persons with kidney trouble, especially rare meats, raw milk and eggs with the white still transparent. Even raw milk, the authors state, may do more harm than well-cooked meats. The research also demonstrated, they add, that the organism seems to become accustomed to the nephrotoxic action of the albuminoids in time, and consequently it is best to keep up a regular ration rather than to permit great fluctuations, as for instance, ingestion of meat by a vegetarian. The fact that the same signs of an injurious influence were evident in the liver as well as in the kidneys in this research indicates, they think, that the conclusions probably apply to persons with liver derangement as well as to those with nephritis. The ability of the stomach to digest albuminoids is thus an important factor in nephritis as insufficient gastric digestion allows them to be absorbed in full toxic intensity.

Semaine Médicale, Paris

March 9, XXX, No. 10, pp. 109-120

38 *Gastric Amyxia: Lack of Gastric Mucus. (L'amyxie gastrique.) L. Cheinisse.

38. **Lack of Secretion of Mucus in the Stomach.**—During the last four years several articles have appeared on the pathologic absence of secretion of mucus in the stomach. The term "amyxorrhea" has generally been applied to the condition but Cheinisse comments on the absurdity of this term and proposes calling the condition "amyxia." The lack of the protective coating for the stomach walls afforded by the layer of mucus, explains a number of morbid conditions, especially in hyperchlorhydria. Schalij reported last year some cases in which the symptoms were those of hyperacidity, but one hour after the test meal the acidity was scarcely above normal while the lack of the protecting mucus explained the disturbances. Kaufmann found that silver nitrate relieved such patients, which fact he explains as due to the action of this drug in stimulating the production of mucus. Schalij found that oil seems to replace the missing mucus and cover the stomach mucosa with a bland protecting coating. The oil has to be ingested before eating; otherwise it only floats on the surface of the stomach content and does not come in contact with the mucosa. He has his patients take from 1 to 5 c.c. of olive or almond oil before meals, increasing the dose to 10 or 15 c.c. at need. Cheinisse remarks that gelatin or any similar substance might be used in the same way to advantage as a substitute for the oil. The benefit from bismuth may be due to its stimulating action on the secretion of mucus. Recent experimental research by Dubus seems to have established this; the bismuth not only promotes the secretion of mucus but the mucus in turn causes the bismuth to adhere to the walls of the stomach. All the data at present on hand in regard to gastric amyxia, Cheinisse adds, harmonize with what Turck has published in respect to the factors concerned in the healing of peptic ulcer.

Berliner klinische Wochenschrift

February 21, XLVII, No. 8, pp. 325-372

39 Gastrotomy for Removal of 103 Nails, etc. M. Borchardt.
40 Technic for Resection of Large Intestine. (Zur Methode der Dickdarmresektion.) A. Tietze.
41 Modifications of Technic for the Wassermann Test. (Verschiedene Modifikationen der Wassermannschen Reaktion.) F. Hoehne. (Id. mit chlorsaurem Kali nach Brieger und Renz.) C. Lange.
42 The New Methods of Staining the Tubercle Bacillus. (Tuberkelbacillenfärbung.) P. Eisenberg.

February 28, No. 9, pp. 373-420

43 *Senile Pulmonary Tuberculosis. (Altersphthise.) R. Staehelin.
44 *Deceptive Area of Dulness over the Apex of the Right Lung. (Falsche Dämpfung in der rechten Lungenspitze.) H. J. Bing.
45 *Frequency of Tuberculosis in Children. (Häufigkeit der Tuberkulose im Kindesalter.) H. Nothmann.
46 The So-called Miliary Aneurisms in the Brain. (Die sogen. miliaren Aneurysmen der Hirngefässe.) L. Pick. Commenced in No. 8.
47 Experimental Research on Fat Tissue Necrosis. (Zur Kenntnis der Fettgewebsnekrose.) C. Frugoni and G. Stradiotti.
48 Roentgen-Ray Pictures of the Stomach during the Act of Vomiting. (Ueber den Brechakt im Röntgenbilde.) Levy-Dorn and S. Mühlfelder.
49 Treatment of Hypertrophied Prostate. (Behandlung der Prostatahypertrophie.) W. Hirt.
50 Action of Tincture of Iodin in Surgical Sterilization. (Wirkung der Jodtinktur bei der Hautdesinfektion.) K. H. Kutscher.
51 Recent Research on the Hypophysis Cerebri. A. Münzer.

43. **Senile Phthisis.**—Staehelin refers to the cachexia sometimes encountered in the elderly and possibly ascribed to

imately the same in the cadaver as in the monkeys. If the human brain should prove as tolerant as the monkey brain surgical procedures in this region will be much facilitated by this technic.

82. Operative Treatment of Gastric Ulcer. *Payr insists that operative measures for gastric ulcer should be strictly individualized for the character and location of the tumor.* He believes in more *general resort to resection rather than the routine gastroenterostomy. The latter is by no means always* successful in curing all *disturbances. The main argument in* favor of resection, however, *is the discovery of signs of a* malignant tendency in the *assumed benign gastric ulcer. In* more than 25 per cent. of his *cases of callous and other gastric* tumors the microscope *revealed carcinoma cells* somewhere in the resected patch. *Transverse resection leaves conditions* quite different *from those after excision; patients scarcely* ever vomit after the *former with the axial coaptation of the* stumps, far less *often than after a gastroenterostomy* or excision.

84. Leg Sign of Tetany. *Schlesinger has discovered a* phenomenon which he thinks *is destined to prove an instruct*ive sign of tetany in the *intervals between the attacks.* It is connected with flexing the hip-joint; as the patient reclines, if the stretched legs *are passively lifted the knees* show a tonic muscular *spasm of extension while the foot* assumes a position of extreme *supination or extreme* pronation. The phenomenon is also elicited *spontaneously* if the patient sits up in bed or, when standing, bends forward at the hips. The tonic *spasm is preceded by paresthesia in the limb.* On the other hand, pressure *on the* nerve trunks *or* kneading massage of folds of the skin has no effect in *eliciting* the sign. It parallels Trousseau's phenomenon, *occurring likewise* between attacks and on the *same side. The leg phenomenon* had been found pronounced in four *cases* of tetany at date of writing, both in children and adults. *In one case* mentioned the patient had no spontaneous contractions in the legs otherwise.

Zentralblatt für Chirurgie, Leipsic

March 5, XXXVII, No. 10, pp. 353-400

87 *Intravenous Infusion of *Epinephrin. (Berichtigung über die* Verwendu[illegible] L. Heidenhain.

88 Intravenous [illegible] *Frage der intravenösen Nar*kose.) [illegible]

89 *Retention [illegible] *After-Treatment of Severe Peri*tonitis. (Anwendung [illegible] bei der Nachbehandlung schwerer [illegible] J. Westerman.

90 Pathogenesis of Retrograde Incarceration of the Intestine (Zur Pathogenie der "Hernie en W" bzw. der "retrograden Darminkarzeration.") F. De Beule.

87. Intravenous Injection of Epinephrin.—Heidenhain has found subcutaneous injection of suprarenal preparation in salt solution entirely useless. He has never tried giving it by rectal infusion, but he recommends *intravenous* infusion as a valuable and entirely harmless method of improving conditions in the circulation as a preliminary to an operation when th[illegible] is reason to anticipate cardiovascular trouble.

89. Retention Stomach-Tube in *After-Treatment of Pe*[illegible][illegible]nitis. Westerman comments on the prompt relief that [illegible] lows lavage of the stomach in case of the local paralysi[illegible] the intestine so frequent with severe peritonitis. The sa[illegible] effect are obtained with high jejunostomy; vomiting cea[illegible] when the distended intestines are emptied of their conten[illegible] and recovery may ensue in the most desperate cases. The au[illegible] [illegible] combat the autointoxication which results from inhibi[illegible] [illegible] normal intestinal peristalsis. *The lecithin in milk* [illegible] putrefying in the intestine is split into neurin a[illegible] [illegible] production of other injurious substances. [illegible] [illegible] all trouble from this source, he asserts, [illegible] [illegible] rubber tube, about one-fourth of an in[illegible] [illegible] through the nose into the stomach, the outer e[illegible] [illegible] on the floor. Every half hour the tube wa[illegible] [illegible] to see if the siphon action was continuing [illegible] [illegible] over 4 liters of fluid intestinal contents wer[illegible] [illegible] out of the stomach and large amounts of [illegible] [illegible] through the tube. Two days later [illegible] [illegible] was only slightly tinged with bile and the [illegible] [illegible] although the patient protested against [illegible] [illegible] of return of the former distress. He has [illegible] [illegible] retention stomach tube in 16 cases. [illegible]

pharyngeal reflex is lively, the mucosa in the throat is anesthetized beforehand; the tube is introduced through the nose to a depth of about 18 inches and fastened with a string to the head. *The patient is allowed to drink freely,* which is an additional *relief, even* although the larger part is evacuated at once, *rendering* necessary administration of water by other means. *The walls of the* tube must not be too thin, and it should *have two openings in the side* below to prevent obstruction *by protruding* gastric mucosa.

Zentralblatt für Gynäkologie, Leipsic

March 5, XXXIV, No. 10, pp. 339-368

91 Case of Extramembranous Pregnancy. (Graviditas extramembranosa.) B. Nolle.

92 *Diagnosis and Treatment of Uterine Sarcomas. N. Kakuschkin.

92. Diagnosis and Treatment of Uterine Sarcoma.—*Kakuschkin reports a case in a woman of 39, 8 years after* her fifth childbirth. During this interval she had abnormally frequent menses, slight pain in the stomach occasionally, and anemia. *A* large polyp was found in the vagina ánd cervix, and was *removed* by cutting out the base of the pedicle. There was nothing to suggest malignant growth but casual microscopic examination revealed that the polyp was a sarcoma, *although* the pedicle seemed free from malignant characteristics. There has been no recurrence during the 9 years since. He curetted the uterine cavity after excision of the tumor, painting it afterward with tincture of iodin and draining with iodoform gauze. The case teaches the importance of microscopic examination in even the most benign cases, and also that hysterectomy is not necessary if the pedicle is not involved in the cancer. If hysterectomy is done it may be *advisable to make two operations of it.*

Zentralblatt für innere Medizin, Leipsic

March 5, XXXI, No. 10, pp. 249-272

93 Stasis Cyanosis in the Head. (Beitrag, betreffend die Stauungblutungen am Kopfe.) Focke.

Riforma Medica, Naples

February 21, XXVI, No. 8, pp. 197-224

94 *Topical Temperature Reaction in Pulmonary Tuberculosis. (Alcuni rilievi topotermometrici nella tubercolosi polmonare.) *C. Frugoni and F. Leidi.*

95 Incarcerated Femoral Hernia Containing Tube and Bladder. (*Ernia crurale destra strozzata* contenente la tromba uterina e la vescica.) M. Dardanelli.

February 28, N[illegible] 225-252

96 Histologic Research on G[illegible]dneys and Liver After Injections of Adrenalin [illegible]

97 Seroreaction in Malta F[illegible]ani.

98 *Advantages of Enterost[illegible]tonitis. G. Volt[illegible] Commenced in No. 8.[illegible]

94. Topical Temperature [illegible] **[illegible]onary Tub**[illegible]sis. Frugoni states that [illegible] lin test the [illegible] the organs beneath and [illegible] of the tu[illegible] revealed by the regiona[illegible] in the temp[illegible] [illegible]asures it with a sp[illegible]rmometer[illegible] horizontal spiral bulb [illegible]ss, covere[illegible] thick glass. The [illegible]plied in[illegible] ical points for fro[illegible]tes at [illegible] As the tuber[illegible] up [illegible] the tuberculin.[illegible] [illegible]-tenths to sev[illegible] the temperatu[illegible] injected. E[illegible] [illegible]ulin or it [illegible] be a [illegible] more. [illegible]

The Automobile

FOR THE PHYSICIAN

As a part of his Professional Equipment and as a means of Pleasure and Recreation

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THE AUTOMOBILE IN PRACTICE

COULD the practitioner segregate his practice and confine it within certain limits, the condition would seem ideal; but the harder he works and the more skill he acquires, the wider becomes his circuit. The exigencies of practice in a large city, therefore, necessitate some other means than the horse and carriage for him to reach his patrons. Although I had driven horses for twenty-five years, I turned to the automobile in 1902.

EARLY EXPERIENCES

My first venture was a single-cylinder machine (109*). The trials I had cranking it in both warm and cold weather make me unhappy now when I think of it. Three weeks after I had become its owner I became ambitious and started with my wife for a tour expecting to go to Buffalo. It began to rain shortly after we started and we ploughed through mud and water some twenty miles until, on a railroad bridge, I thought I had a favorable place to oil up. I stopped the machinery but, despite all my efforts, I could not make it go again. Our auto journey ended by our being towed to Trenton, some six miles away, behind a coal wagon. I shipped the car to Cleveland and took the remaining portion of the trip on the less exciting but more reliable train.

Reaching Cleveland and ascertaining that the machine was in good order, we started again, this time in central Ohio through clouds of dust. After a ride of 70 miles the wheel of the water pump was broken off and again we had to ship the car back to Cleveland and take to the train. The vagaries of this machine were so numerous and trying that I finally disposed of it. It made so much noise that I never had any difficulty in letting my patients know that I was coming.

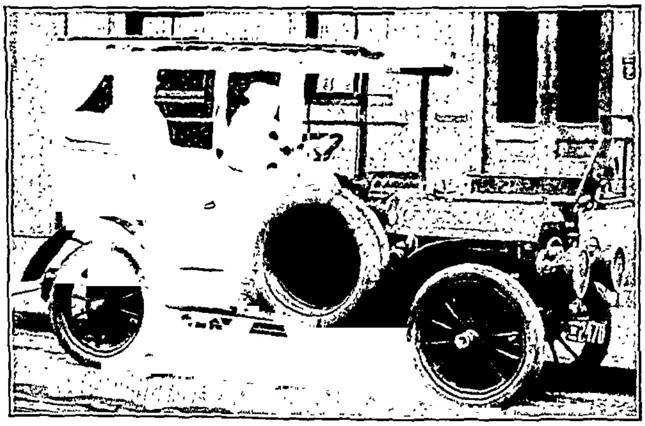

Fig. 1.—Demillmousine (114) of Dr. E. E. Montgomery, Philadelphia.

My next two ventures were runabouts (110*), two-cylinder machines. As I made a contract with the person from whom I purchased the machine that he was to take care of it, make sure that it was in order and if not get me another in its place for a certain sum each month, I had less trouble with this car. It was rather light weight, however, and as I was pretty heavy, occasionally an axle would break.

I then went to an electric (111*), which rode beautifully, was ever ready to go, was noiseless, but very limited in its speed and still more so if the batteries had run a little while, so that I found myself following rather than leading—an unsatisfactory position for an ambitious man. I therefore disposed of the electric and secured a touring car (112*). This car proved more satisfactory, in that it enabled me to afford my family and friends pleasure while I was traveling about the city for business. With this machine the tire problem was the greatest, owing, I am now convinced, to the want of care on the part of the chauffeur. On one journey of 20 miles we blew out four inner tubes and finally ran for a time with the tire collapsed. While going at a pretty fair speed my companion gave an exclamation as he saw the shoe which had come off running ahead of us and he was certain the entire wheel was gone.

TRIES A STEAMER

In order to leave no variety of machine untried, my next venture was a steam machine (113). Until I became acquainted with this I had so many unusual and unpleasant experiences that my family rather looked for me to undergo premature cremation, especially as I attempted to ignite the pilot light without raising the hood, and the accumulated gasoline exploded in my face, taking off most of what little hair I had left. I found out, however, that such an occurrence was unnecessary and due only to my stupidity. The machine did me more service than any other of the same class I have ever had. It rides beautifully, climbs the steepest hills without the slightest difficulty, and as it is entirely controlled by the throttle, it is capable of moving from a speed of two to one of fifty miles an hour by the motion of the handle governing the latter. The driver of a steam machine must keep his mind on what he is doing; he cannot go wool-gathering, as he must constantly remember that there must be water in the boiler and not too much of it, and that there must be satisfactory steam pressure and sufficient pressure on the gas. To watch all of the many gauges, as well as the road over which one travels, to say nothing of the vehicles and other travelers, certainly suffices to keep the driver wide awake.

PROTECTION AFFORDED BY CLOSED CAR

After recurrent attacks of grip, two of pneumonia, middle-ear disease and a mastoid operation, I began to realize that the human machine I possessed needed more protection, so my next venture was the machine (114) a picture of which accompanies this article. This is a rebuilt 1906 machine. It had seen considerable service before I got it, but it has traveled over 10,000 miles since with scarcely any trouble except that incident to tires.

The weight of the machine, being a metal body, necessarily makes tire wear great, but I do not know that the cost of its up-keep is any greater than that of much less reliable machines. It is a satisfaction to know that one has a machine that is ready for work and is almost sure to take one to one's destination and home again.

GRATIFYING ADVANTAGES

The automobile adds greatly to the comfort and pleasure of the physician: it enables him to extend his practice greatly and to afford pleasure and gratification to the members of his family which are utterly impossible by any other means of locomotion.

E. E. MONTGOMERY, M.D., Philadelphia.

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* For names of machines, see explanation in Editorial Department.

FRICTION DRIVE

After reading each of the automobile numbers and nearly enough catalogues to make up the deficit in the post-office department, I decided to buy—as much through the influence of last year's Automobile Number as anything. Also having heard so many owners of small cars say, "When you buy, buy a good one," I decided to buy a friction-driven touring car (149). I ordered my car in March, but did not get it till June, which perhaps was a good thing for the car, as the roads were fine at that time. The agent came and helped unload the car and in two hours took the train for home. So much for training. I wrote to the company for their instruction book and the instructions were to wait, as the book was not out. The last time I wrote, in August or September, it was not out, and I am still waiting. So much for instructions—but the experience! Say! The experience was here to stay and a new issue each day. I suppose my experience was very similar to what all new owners have had with the exception of (or maybe better say addition of) the friction-drive. So I shall confine myself to the friction-drive.

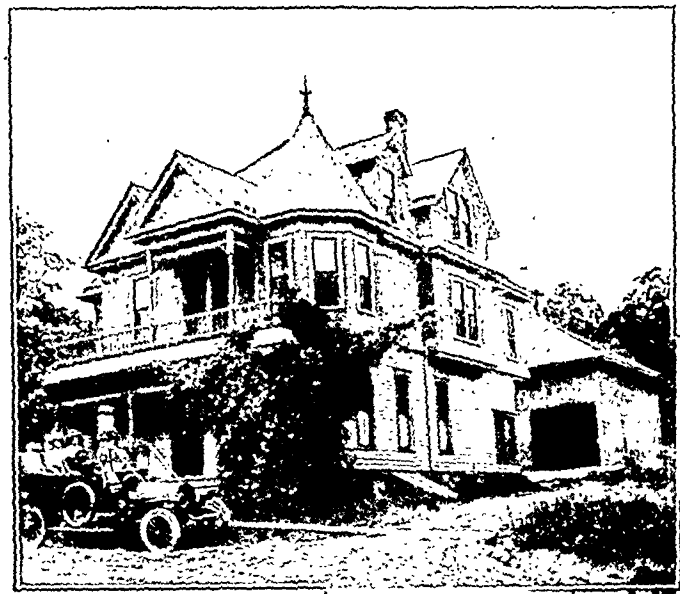

Fig. 2.—Automobile (149) and residence of Dr. E. A. Cantonwine, Parkersburg, Ia.

To start with, the most of my troubles could have been avoided if I had received some instructions with the machine. There was more friction than drive to start with, but, like everything else about the drive, this was simple when you knew how to remedy it. There is a certain amount of wear on the friction-rim at all times due to the outer and inner sides of the rim having to travel a different distance on the disc. This tends to heat the disc and, with a little slip, enough heat is developed for an automatic foot-warmer, that is, a warmer of mind and body.

I had a new catch made for the speed lever so that it gives me more speeds and wears the disc surface even, which will save trouble by preventing ridges. The expense of the drive has been the welding of one brace-rod. The fiber rim will soon have to be replaced, which will cost about $3. The disc is as good as new. The friction drive is all right, but I believe it requires more attention than a shaft drive. It makes up for this by the saving on the rest of the machinery. There is no jerk in stopping and starting, the speed can be increased gradually and the driver can set his speed according to the road. Sands and hills and mud, of which this part of Iowa has its share, have never stalled me so far. If they ever do I don't believe it will be due to the friction drive.

E. A. Cantonwine, M.D., Parkersburg, Ia.

BASEMENT AN IDEAL GARAGE

Any physician, almost, can buy a machine but there are few who can afford to pay the constant repair expense charged by the average garage. The basement garage has proved to me to be the most convenient arrangement for the busy physician. The basement garage is accessible without leaving the house and any physician can slip on a mechanic's suit, go down and in a few minutes repair something which he would otherwise be obliged to bring into the shop and pay perhaps more than he had earned that day.

With this scheme the machine never freezes, is easily washed, the oil lubricates better and any insurance company will allow a machine to be kept in a basement if the gasoline is kept in an underground tank or in the machine. A runabout kept in such a garage is now in its fourth year of constant use with promises of many years of service to come. The accompanying illustration shows the advantages of such an arrangement.

J. B. McNerthney, M.D., Tacoma, Wash.

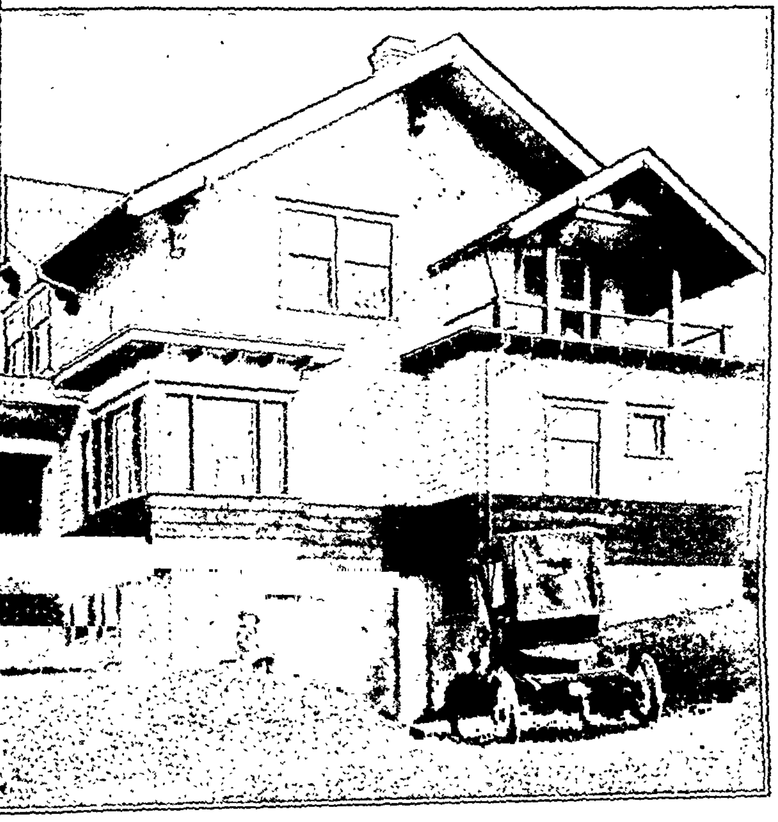

Fig. 3.—The car (161) and residence of Dr. J. B. McNerthney, Tacoma, Wash., showing his neat provision for a garage in his basement.

A HIGH-WHEELER FOR WINTER AND A PNEUMATIC FOR GOOD WEATHER

Previous to April 1, 1907, I used, in my practice, two horses valued at about $500. Then I bought a 10 h. p., air-cooled, two-cylinder machine (122) with hard rubber tires. I kept accurate account of expenses for two years.

A CAREFULLY KEPT EXPENSE ACCOUNT

The total expense was $293.29, which averages $146.64½ for one year, about $12.23, for one month, and $2.82 for every seven days. This is cheaper than shoeing and feeding one horse and keeping buggies in repair. In this total expense I included $58.48 for gasoline; two pairs automobile gloves: two rubber-plush blankets; twice retiring the wheels; all the lubricating oil necessary; replacing two motor-shafts, which were $20 each—said to have broken from "crystallization," but in my opinion, from a flaw in the steel; replacing two sets of worn out gear sprocket-chains; also batteries, carbid, licenses, tags, etc.; in fact, everything necessary to run the machine for two years. In these expenses the driver is not included because I have the same man I had when I drove the horses.

In the winter of 1907-8 I could not use the machine for four weeks on account of snow and sleighing. In the winter of 1908-9 I used horses three weeks in sleighing. With these exceptions I used the machine to do all my work. I am sure that I did my work in one-third the time it would have taken with two horses.

In my experience of two years with the car I found I had a very serviceable machine; but, like all automobile enthusiasts, I wanted more speed, so, on May 14, 1909, I bought another car (123), a 20 h. p., water-cooled, four-cylinder car. I used this machine until about the middle of December, 1909, when I put it in storage. I had the motor dissected and examined and cleaned and found it in perfect order, except that the connecting rods were slightly loose. At this time my speedometer registered 3,129 miles. In these seven months my total expenses were $128, which averages $18.29 a month, or, per mile, about .041 cent, not including tolls, which in Pennsylvania are an outrage to the automobilist. On several long trips I used 5 gallons of gasoline to each 100 miles traveled. In this period I had five punctures, each caused by a nail or tack. One tire still holds the air that was pumped in when I purchased the car.

USES HIGH-WHEELER FOR WINTER WORK

At a cost of $7.35 I changed the single rumble seat to a double rumble by having the middle of the back sawed apart and a piece of board joined to the sawed ends, retaining the curve, and a new cushion placed on the seat and back on a new board.

With this car I have climbed, in high gear, steeper hills than the majority of the forty different cars owned in this place of about 10,000 inhabitants. One unnecessary expense was a top that I used the first day. Since I stored this car (123) I am using the old one (122) again, and will continue to do so until pleasant weather. I have discovered that there is less money invested in these two low-priced cars, for all the years' service and pleasure, than the same amount put in one high-priced car. The cost of upkeep is likewise less per mile in both than in a higher-priced car. A. C. WENTZ, Hanover, Pa.

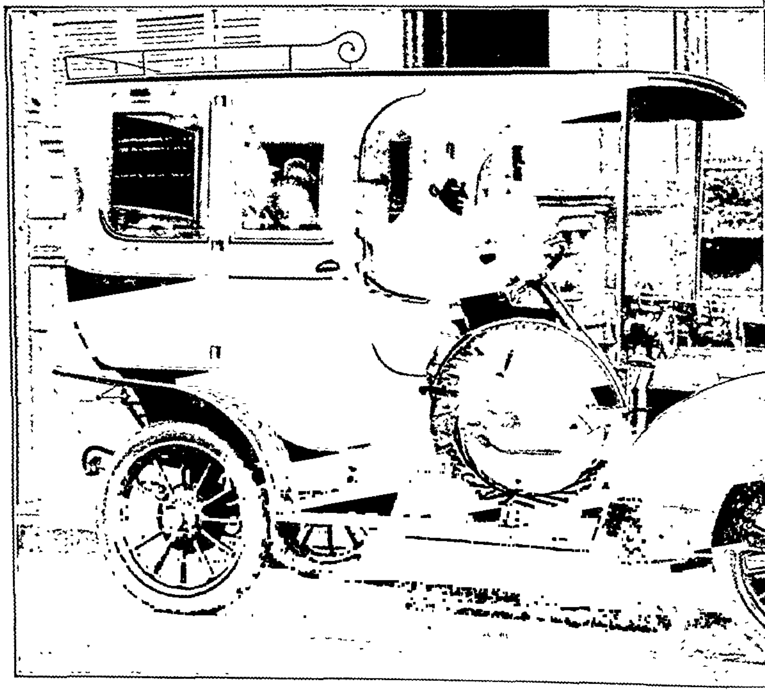

Fig. 4.—Car (117) used by Dr. James M. Anders since April, 1907, until the present. On the whole, the car has been quite satisfactory, although the body is perhaps too heavy for the chassis—a combination of conditions that is a bit hard on tires.

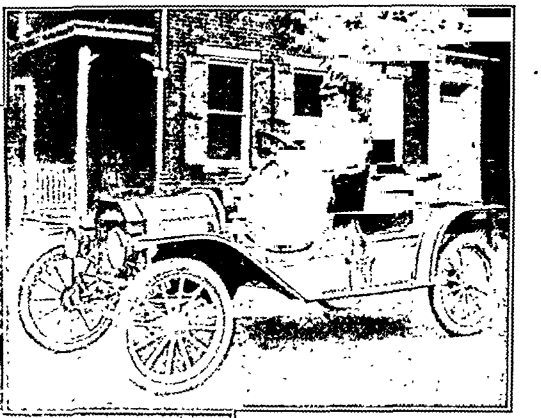

Fig. 5.—Dr. A. C. Wentz, Hanover, Pa., in his runabout (123 *).

THE STEAM AND THE GASOLINE CAR FOR THE PHYSICIAN'S USE

HAVING lost my horse, and declaring that I would never own another one, in March, 1904, I bought a steam runabout (126 *). For seven months I did all my work and drove to neighboring cities when I pleased, covering, on an estimate, 5,000 to 6,000 miles, at a cost of $1 day. In other words, the expense was the same as that of the horse. As I understood my car thoroughly, I had no trouble whatever outside of occasional tire troubles.

The next two years I used the car, but kept less accurate account of expense. I think that a dollar a day would cover all. The car, being older, required more repairing, but as I didn't run nearly as many miles I kept down the expense.

The three seasons that I used my steamer taught me that for a physician's use steam was not entirely satisfactory. A steam car has to be kept alive all the time it is in use; so that, when making calls, the pilot light, which must burn all the time, gets badly on one's nerves; and as the car gets older, and the pilot light more cranky, I would often start on calls without the car rather than put up with the worry about the pilot while making the call. I understand that in later models of this make of car this trouble of the pilot light has been done away with.

Another trouble with a steam car is that unless it can be kept in a warm garage it is practically out of commission as soon as freezing weather comes. As I kept my car in a small shed that I built for the purpose, I had to use great care to draw out all the water at night, even disconnecting the steam-gauge, as water gets trapped in it and freezing ruins it.

Because of these troubles, in the spring of 1907, I purchased a two-cylinder 12-horse-power gasoline runabout (127 *), and I must admit that this car has been more practical for my work. To be sure, it has given more trouble than the steamer and has twice been towed home (which never happened to the steamer). But on the whole I prefer the gasoline car for a physician.

Last spring I had the misfortune to break the crank-shaft, and it was over four months before I could persuade the makers to send me a new one. Why makers should be so loath to supply one with new parts when the old become broken or useless is more than I can understand; here is a good argument in favor of buying an automobile that is made near one's home.

HERBERT W. MANAHAN, M.D., Lawrence, Mass.

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* For names of machines, see explanation in Editorial Department

THE CHOICE AND CARE OF AN AUTOMOBILE

Address Delivered by William E. Sharp, General Superintendent of the Armour Car Lines, Before the Englewood Branch of the Chicago Medical Society, at its Automobile Clinic,* held in Chicago, Feb. 1, 1910

WHAT I shall say will consist of reminiscences from my five years' experience driving a pleasure car (104) beginning with a "one lunger" (103)—and at the outset I have to say that I do not agree with the physicians in all cases, because when you get a "one lunger" you send him away to the mountains, while it was my experience that it was better to stay on a level road.

About a year ago I was appointed a member of a committee o investigate the subject of automobile trucks for commercial use, and through this investigation I acquired what little knowledge I have on the subject of designing an automobile. During our investigation we visited the most reputable manufactories of automobiles in this country, as well as some of those that have not, and will not have, a reputation.

At the Paris Exposition in 900 France had the best hibit of gas engines for tomobile use, and the ingenuity displayed in design was a surprise to gas engine manufacturers; but during the last ten years the American automobile manufacturers have made wonderful progress, and to-day there can be no doubt that the American-made automobile is second to none; in fact, there is no need to go abroad to buy a car of the highest type and with the best appointments.

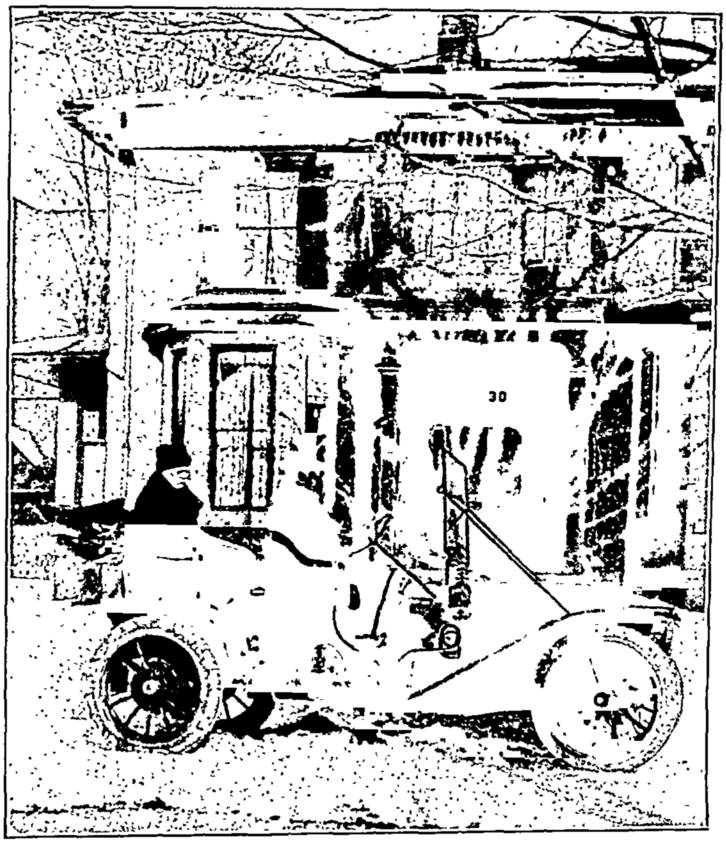

Fig. 6.—Dr. Adam H. Wright, Toronto, Canada, President of the Canadian Medical Association and Professor of Obstetrics in the University of Toronto. This photograph, taken Feb. 14, 1910, shows the car (107) in front of the house and office. It is a four-cylinder, thirty horse power car. There has been an unusual amount of snow in Toronto this season, there being on an average over one foot on the ground when this picture was taken. The car was not out of commission on account of snow for five minutes during the winter. The chauffeur was accustomed to horses all his life, and was a coachman in England for fifteen years. He came to Canada about three years ago because automobiles had become so common in England. He was Dr. Wright's coachman for about two years. When the horse was discharged and the car came, last September, he reluctantly took charge, soon learned to run it, has pretty well learned its mechanism, and now would not go back to horses on any account.

HOW TO SELECT A CAR

It does not follow, however, that anything in the shape of a gasoline tank mounted on wheels, making a hideous noise and giving forth an offensive smell, should properly be considered an automobile. Therefore, the first thing we will consider, as laymen, is the selection of a car. It is, of course, understood that it must be a good one. But how shall the average layman, who is not familiar with the automobile, knows nothing of its design or construction, answer this question? To which we reply: by purchasing from a reputable maker, one who is a manufacturer and not an assembler; one who has worked out all of the problems for himself, instead of copying from what others have done; one who is reliable, and who has a reputation and investment which make reasonably sure that he will still be in the business when your car gets old and becomes worn, needs repairs and an occasional new part; also, one who maintains his own branch houses, where you can deal directly with the manufacturer of your car; whose motto is, "A square deal, even in the automobile business."

Too often the average layman going out to buy a car looks only for the rated horse power, the wheel base, and the maximum speed that the car will make per hour, and completely ignores, or does not understand, the important points on which he should base his selection, which, in the first place, depend very much on the particular service to which the car will be put.

The car with the long wheel base makes the most desirable car for a country road, particularly rough roads. On the other hand, it is more difficult to maneuver in a crowded street. A heavy car is by all means the easiest riding car, and not much, if any, harder on the tires, providing, of course, that the tires have been proportioned to the weight of the car. On the other hand, a heavy car does not respond to the moves of the throttle as quickly, and it can hardly be expected that an engine, unless of size out of all proportion to the car, is going to accelerate a heavy mass as quickly as a light one. Again, the heavy car is not affected by small obstacles; it moves over the road more smoothly, and with uniform speed, and it is of itself a fly-wheel.

While it is fair to assume that the cost per running mile is greater for the heavy load than for the light one, this statement is subject to qualification, for with a given wind resistance the heavy car, when under motion moves along with nearly the same power as the light one. This applies, of course, to level roads. Climbing hills the lighter car has somewhat the advantage; but also the disadvantage of being unable to stand the rack and strain of service. The very thing that gives the car weight also gives it strength.

ACCESSIBILITY OF ENGINE

Perhaps the most important point to be considered in selecting a car is accessibility of all parts, or, in other words, the ability to remove any one part of the car without disturbing all others. On this point the average salesman will disagree with you, having you understand that his particular make of car never needs to be dissembled, that nothing wears out, that no accident can possibly happen—a consummation devoutly to be wished, but one which can ne'er be hoped for.

One must be able to get into the crank case without disturbing the other parts, for the bearings will eventually wear and require adjustment. One must be able to dismount the magneto, or the circulating water pump, without being required to remove the radiator. The oiler must not be in the way of any of these operations. Not that the oiler is in itself complicated, but it has a great many attachments in the way of small pipes, which should always be tight and shipshape to insure perfect results. The transmission as a whole should be demountable without the necessity of disturbing any of the rest of the assembling, for transmissions are subject to accidents, and more often to flagrant abuse. The manner in which the gears are shifted may subject them to strains far beyond the endurance of any metal, hence the transmission should be located so that it is easy of access and may be entirely removed without disturbing any other parts.

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* A general discussion on the subject followed the reading of this paper and an abstract of this is presented at the end of the article.

The time required for the clutch to slow down after the release, so that the two gears about to be engaged are of the same speed, varies with different cars—not only different makes, but individual cars of the same make. All this must be learned by the driver. With a little experience, and having once learned it, there is no excuse for the slamming method of shifting gears, which attracts attention from the sidewalk, encourages profanity, and is a fruitful source of expense.

One of the first questions usually asked, and least understood, is, "What is the rated horse power of your car?" The answer is "30" or "40," or whatever may be the rated horse power of the car, and 40 seems to be a familiar term; but your question has not been answered. It is not so much a question of the size of the cylinders, or how much gas you explode, or with what force the explosion takes place. Power can be determined only by the amount of force delivered at the rear wheels, and let it be understood that in testing the power of an engine only the full capacity at any given speed is considered, it being obvious that under the throttle it is not a truth-teller, its performance in this instance not being in any way an index of its possibilities; hence, as an automobile is used but a fraction of its time to its full capacity, it is not expected that a testing load shall be the daily stunt of any car, for more than ninety per cent. of the time the car calls for less than half the rated power of its engine, and so for that ninety per cent. of the time one engine is about as good as another. But within the ten per cent. of the time remaining, the car undergoes difficulties which call for Herculean efforts, and unless successfully surmounted the other ninety per cent. is of little value.

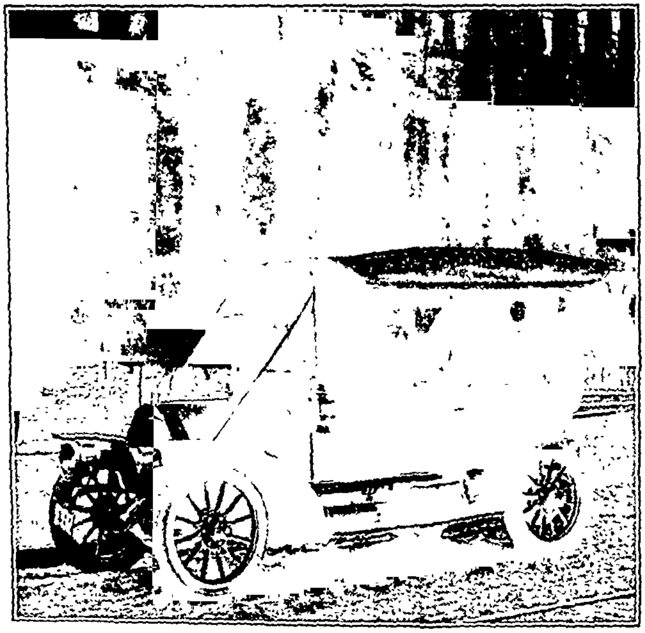

Fig. 7.—Forty horse-power machine (174) used by Dr. John G. Clark, Philadelphia, Professor of Gynecology in the University of Pennsylvania. The picture was taken in front of the main entrance of the University Hospital.

All physicians know the immense reserve of the human power plant, seldom used, but necessary for its preservation in time of trial, and the good designer, ever responsive to the hints which Nature gives him, builds his car along liberal lines, with plenty of power, with weight enough to carry it, and so distributed that it will not be topheavy. To get plenty of power without increasing the dimensions of the engine beyond a reasonable limit, the good engineer takes into account these days of stress and trial, and makes the conditions under which the engine operates the basis for his work, and except in rare instances, when the car is run at its highest possible speed, which also calls for power, the times when its engine is running at its hardest load is when it is running also at its slowest speed. Therefore, those factors which fix the power of an engine at high speed are not the most important, but those which restrict its output at low speed and heavy explosions become of paramount importance.

The high speed engines are of necessity high compression engines, and their performance is not so good at low speed. I have in mind an engine developing 34 h. p. at 1,600 revolutions per minute, and 12 h. p. at 300 revolutions per minute. By raising the compression ten pounds, the h. p. at 1,600 is raised to 36½ or 37, but drops some 4 h. p. at 300. It is the part of a good engineer so to design his engine and his car that it will perform well when under its hardest load, which is in low speed.

The friction of the cylinder walls, then, is a larger factor than the inertia of the reciprocating parts, and any method of construction which will diminish this wall friction in a large degree is preferable. Also, the friction of the main bearings is a large factor under heavy explosions, a much larger factor than under the more rapidly recurring blows of the lighter explosions due to high speed. Hence, any design which lessens this friction is preferable.

POINTS ABOUT ENGINE CONSTRUCTION

It has been the belief of some engineers, and the fixed conviction of the layman, that rapid flame propagation is good for the development of power, a truth which, stated without qualification, may lead to great error, for if this were a truth unqualified, an instantaneous flame propagation would, of course, be better than one which was dragged out. Ergo, a spark plug in the head near the center of the charge, where the flame would be propagated but a short distance, would be the desirable construction. Well, it is desirable construction for high speeds, but at high speeds most any construction would be satisfactory, while at low speeds we have radically different conditions.

The time required to propagate a flame throughout the mass of gas in an ordinary automobile cylinder varies from 1/600 to 1/300 part of a second; during only 1/300 part of a second the crank has traveled when the car is doing its heavy work at speeds less than 20 miles an hour, about 15 degrees. If the propagation of the flame is shortened to 1/600 part of a second, the crank under the same circumstances has traveled approximately seven or eight degrees, and the full force of the explosion is expended on the crank at a time when it has almost no turning moment, and if the sides of the cylinder are not sufficiently cool to permit of proper lubrication the gas loses its pressure before the crank has reached that portion of the stroke where the piston pressure is most effective. If, however, there is a continued rise in the pressure up to the time the crank has passed 15 to 20 degrees of movement, the piston is then traveling at a good rate of speed, and the contracting effect, due to the cool cylinder walls, is much lessened, and we have a large value of turning moment. By setting the spark plug in a port to one side of the cylinder, and proportioning the distance so that under these hard loads the flame is propagated to reach its maximum when the crank has traveled through about 25 degrees, we have a much more sustained pressure on the piston and a more nearly continuous torque on the crank.

Now, then, if the cylinder is set tangent to a circle concentric with the crank shaft and of such diameter that the connecting rod is parallel with its axis, at the time the explosion has reached its highest value, then we have at that time no friction in the cylinder due to side thrust, whereas if the cylinder is radical to the crank shaft the friction on the cylinder walls reaches considerable value when the crank has passed through 25 degrees.

repair shop. I take care of my car (170) myself and I can get out of trouble without assistance. One should have a little shop with a little lathe and when a casting or some part is broken be able to fix it up.

Dr. Charles Henderson Miller: From what I can learn it would be mere folly to argue against the use of an automobile for a doctor's work. I do not hear any of the men who have driven machines say they would care to go back to horses. My advice to a man thinking of using an automobile would be to buy one as quickly as he can afford to pay $1,000 for a machine but get a good one. If he has a family, I advise that he get one large enough to carry more than two passengers. It would be a good plan to get one that he can use as a coupé in the winter time, if he wishes, and convert into a tonneau in the summer time. Every doctor should have a book telling him how to take care of his car. Excessive power is neither desirable nor necessary. A maximum of 20 h. p. is sufficient if the weight of the car is not too great, and the greater the horse power the greater the weight of the machine. It is just as available on the road for hills and otherwise with the lighter power. The gasoline engine of this car should always be in front—never under the seat. It is a constant source of concern and requires a good deal of attention. I am not positively decided as to the best quality of oil to use. There are a number of different makes and grades. I am using oil that costs about 20 cents a gallon. The cost of gasoline is practically nothing. A car of this kind will save at least 50 per cent. of the time of the physician using it, in other words, he will have half of his time for leisure and yet do the same amount of work.

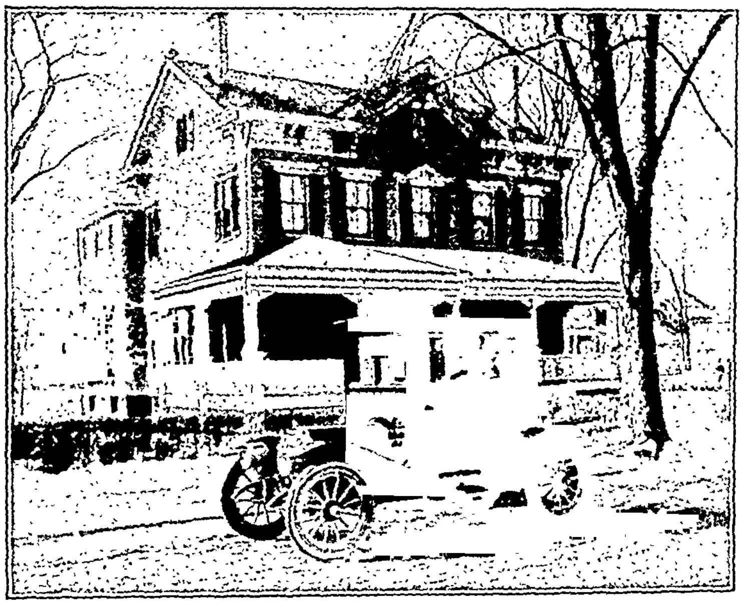

Fig. 10.—Runabout (124), office and residence of Dr. F. C. Ard, Plainfield, N. J. The coupé body was added to the car for protection from bad weather in winter. It does away with the necessity for fur coats and heavy clothing. It is removable for summer use, when the open body is replaced.

There is a great deal to be said about the way a car is cared for to eliminate trouble. The first thing is to have the car properly tired. Good tires are money-saving investments. It is well to have a vulcanizing equipment so that when you see a hole working into the tire you can seal it up. The tires on my car have run seven thousand miles and I think they are good for several thousand miles more. I take care of the car myself. Regarding the maximum speed one should travel, I think there is a constant tendency to want to go faster than is necessary or safe; and the life of the car is shortened by fast driving. I am exceedingly well satisfied with my automobile (171), although I paid the price of learning how to run it in three years' use and misuse of this car's immediate predecessor.

Dr. C. H. Lovewell, Sr.: I do not own an auto and perhaps never will own one. I know a machine is a very fine thing, but you pay for it each month. I have owned in all six horses. In my first year in Chicago (1875) I kept my horse in the livery stable when business was fair, and when business was slack I put the rig in the coal shed, to go back again to the livery when business warranted. After a time I drove two horses and enjoyed driving them as well as any of you doctors enjoy your autos. The expense for the team was about $35 per month plus $20 per month for a stable man. I have owned no horse now for several years.

Now, I know just what it costs me to make a visit. I can make one call by trolley car at any time for ten cents in this section of the city. Sometimes I can make two or three calls for ten cents, and I am ready to start at any time during the twenty-four hours in fifteen minutes. I doubt whether there is a physician in Chicago who can make a visit for less than twenty-five cents in an automobile.

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As to the quality of material used in the cheap or moderate-priced car, as compared with the higher-priced machine, it is possible that the same grade of material is used, but it is just as important to have the proper quantity as it is to have the proper quality, and it seems reasonable that you would get a better material in the high-priced car, for the reason that the cost of labor for manufacturing and assembling would be no more than it would be for a lighter car, the same amount of labor being involved in each case, and there is less liability to crystallization of parts where they are made reasonably heavy.

The best oil is none too good. It should be used in the proper quantities—better too much than not enough, although the excessive use of oil will cause trouble. All manufacturers have tested oils to find which will give the best service with his particular type of engine, and that is about the best indicator.

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As to the advisability of purchasing a cheap or light car, it is a fact that there are several light cars on the market that would give considerable service on the boulevards, but it does not follow that a man is going to buy an automobile and stay on the boulevards. He will venture on the country roads, in the majority of cases with his car overloaded, and while he will possibly have satisfactory results with a light car at the beginning, the car is not built to stand any such service, and for that reason it seems to me inadvisable to buy a cheap, light touring car, and that it would be better and cheaper in the long run to buy a car designed and built for general purposes.

repair shop. I take care of my car (170) myself and I can get out of trouble without assistance. One should have a little shop with a little lathe and when a casting or some part is broken be able to fix it up.

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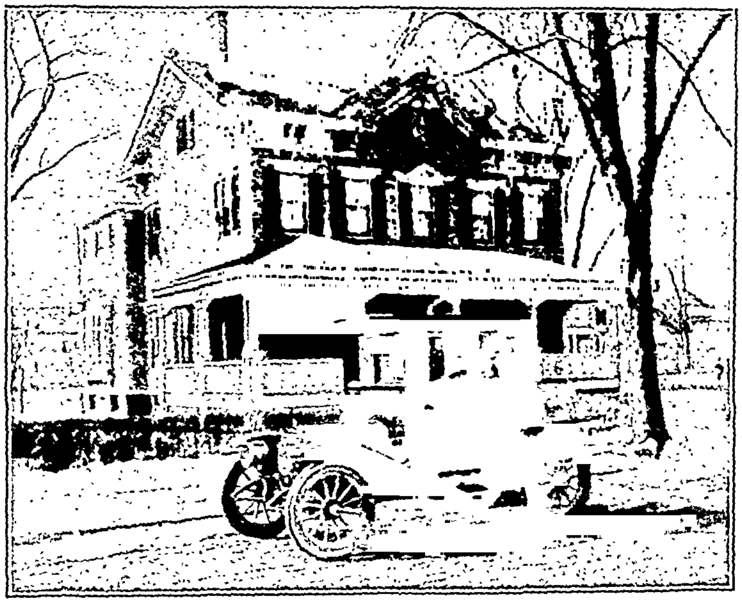

Fig. 10.—Runabout (124), office and residence of Dr. F. C. Ard, Plainfield, N. J. The coupé body was added to the car for protection from bad weather in winter. It does away with the necessity for fur coats and heavy clothing. It is removable for summer use, when the open body is replaced.

There is a great deal to be said about the way a car is cared for to eliminate trouble. The first thing is to have the car properly tired. Good tires are money-saving investments. It is well to have a vulcanizing equipment so that when you see a hole working into the tire you can seal it up. The tires on my car have run seven thousand miles and I think they are good for several thousand miles more. I take care of the car myself. Regarding the maximum speed one should travel, I think there is a constant tendency to want to go faster than is necessary or safe; and the life of the car is shortened by fast driving. I am exceedingly well satisfied with my automobile (171), although I paid the price of learning how to run it in three years' use and misuse of this car's immediate predecessor.

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THE ADVANTAGES OF THE MOTOR-CYCLE

THE MOTOR-CYCLE IS THE KING OF THE ROAD

Getting there and back again—in this the motor-cycle has the laugh at them all. My patients telephone me from the country, "Can't you come on your flying-machine, Doctor?" and, behold, I am at the bedside of the patient before the telephone receiver is hung up. That is the trouble with the motor-cycle; one gets the speed mania. On a dry ordinary dirt-road, not too stony or uneven, one can travel at the rate of 30 to 40 miles an hour. This can't be said of the auto.

Look at the picture: I am called to see a patient in the neighboring village ten miles away. She had her first pain. I'll be there before she has the second one. When I come to the house of my patient I remove that duster, coat, cap and gloves and I'm presentable at any court. I left the dust behind me. Take notice of my scheme of combining the medicine-case, instrument case and sterilizer into one. It is made of copper and curved to fit the small of the back, where it rides most comfortably. It is fastened to the body with a leather strap which is easily detached from the case. It is 15 inches long, 3 inches wide, and 6 inches deep and if I need more room I can make use of the pockets of that coat.

MOTOR-CYCLE VS. AUTOMOBILE

	Motor-Cycle.	Automobile.
Classification.	Light weight, biped monorailer, great saver of power, wear and tear.	Heavy, clumsy, quadruped white elephant, 4 feet at 4 ever-changing levels, great loss of power, wear and tear.
Life.	Long-lived.	Subject to general debility early.
Vital organs.	Little predisposed to grave disorders.	Predisposed to expensive major operations at the machine shop hospital.
Heart.	In case of heart failure, disconnect engine, turn on foot power.	Call ambulance, chains and ropes; "dig up" and get the laugh.
Metabolism.	Normal absorption of oil and gasoline.	Deranged, fever high and drinks like a fish.
Feet (tires).	Long-lived, tetanus occasionally, use antitoxin early, prognosis good, $25 per pair.	Short-lived, susceptible to perforating ulcers and cancers; prognosis bad; $200 per set, price advancing.
First cost.	Sane.	Insane.
Second cost.	Normal.	An octopus monster.
Investment and Economy.	Good.	Poor.

Don't shy of the motor-cycle because it is a biped monorailer; that is the up-to-date feature and that is what makes the motor-cycle the king of the road. On a motor-cycle, your eyes are watching the road and your hands and feet are in constant relation with the mechanism of control and balance.

That is why you never lose presence of mind. That is what makes the motor-cycle safer than other vehicles. Being a monorailer, it gives you better choice and control of the road and better command of yourself and machine than can be enjoyed on any other vehicle that travels on terra firma. Then, too, this monorailer stirs up an enthusiasm that can be equaled only by flying in an aeroplane. It is enthusiasm that we all need. A good motor-cycle is no burden, and when it gets seriously sick on the road it can be wheeled or pedaled along as easily as a bicycle after the engine is disconnected. You need not call for a team of horses; you need no hydraulic jacks, no wrecking-crew. The ride on a motor-cycle is not to be compared to the rough, laborious and dusty ride on a bicycle.

My experience with a motor-cycle as a business proposition and recreation has been extremely satisfactory. It has proved a good investment, a money- and time-saver, and not until the automobile does away with its expensive tires and troubles, its complicated machinery, its great weight and its short life can it be a good investment for the country doctor.

I ride a twin-cylinder 6-horse-power chain-drive (159) in a hilly country with sand in the low places. The fine workmanship, the leverless grip control, the pneumatic [illegible]ing spring fork, the economy of space and symmetry of design on this machine are superfine, and I have yet to find sand deep enough and a hill steep enough to kill the engine on my cycle.

Doctor, if you are not too old and crippled with rheumatism, buy a good motor-cycle and enjoy your trips into the country in a way you never dreamed of. Keep the horse for muddy roads and snow-drifts. F. C. **Dolder**, M.D., St. Charles, Minn.

THE MOTOR-CYCLE

Being disgusted with the trouble and expense incident to keeping horses, in the spring of 1909 I sold my teams and buggies and purchased a three-and-a-half horse-power single-cylinder motor-cycle (118) and used it entirely in my practice. During 1909 I drove it over 2,000 miles at about one cent per mile with a repair bill of only $1.85.

To say that I am pleased with the machine is expressing it very mildly. Calls that used to be hard work are now pleasure trips and there is a fascination and recreation about the riding of a motor-cycle that I never found in any other sport. I can make my trips much quicker than with a team and I have more time in the office. I can go anywhere that there is a path at all, and, in case of emergency, can c[illegible] the prairie at a pace of 18 to 20 miles an hour, while [illegible] good roads I can easily run 30 to 40 miles an hour.

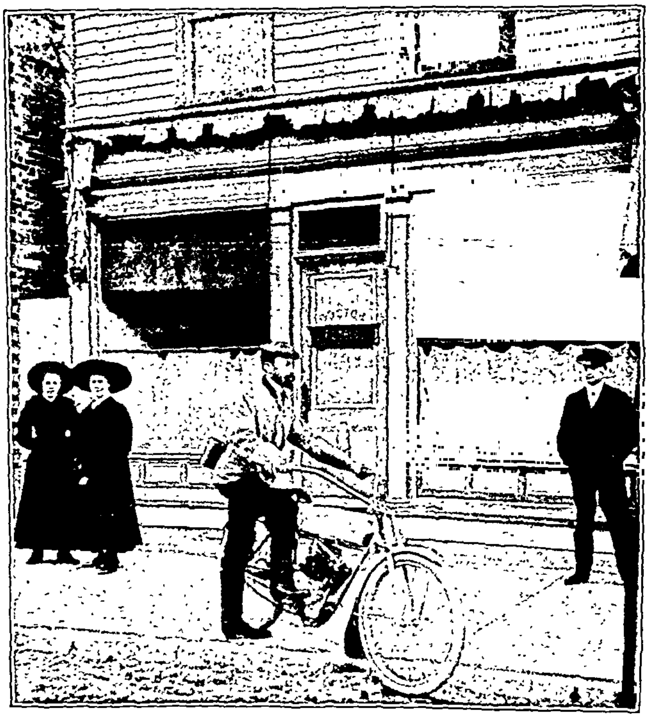

Fig. 11.—Called to see a patient ten miles away. Dr. F. C. Dolder, St. Charles, Minn., and his motor-cycle (159).

I always take entire care of my mac[illegible] I find it far less work, and work that I like better th[illegible] caring for horses. When weather prevents the running of [illegible] motor-cycle I, of course, have to hire a team, but find tha[illegible]en so the cost the year around of using the motor-cycle an[illegible]iring horses when necessary is far less than keeping a tea[illegible] my own and on the whole is many times more satisfactory[illegible]

I believe the wheel I have is as good as [illegible]re is on the [illegible]ket, especially for a beginner, as it is ver[illegible]mple of [illegible]tion and will stand a lot of abuse and h[illegible] [illegible]ing year, though, I expect to exchang[illegible] (119) on account of the many im[illegible] desire for more power that become[illegible] repair shop. I take care of my car (170) *myself and I can* get out of trouble without assistance. One should have a little shop with a little lathe and when a casting or some part is broken be able to fix it up.

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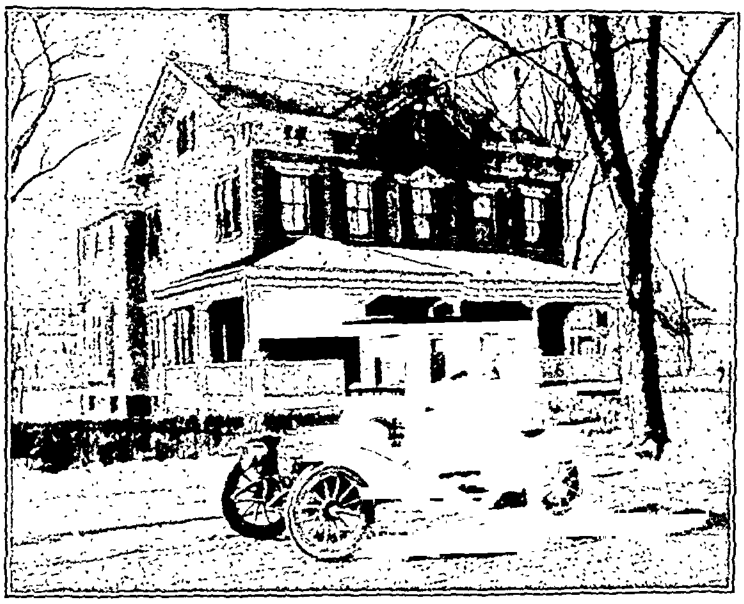

Fig. 10.—Runabout (124), office and residence of Dr. F. C. Ard, Plainfield, N. J. The coupé body was added to the car for protection from bad weather in winter. It does away with the necessity for fur coats and heavy clothing. It is removable for summer use, when the open body is replaced.

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C. H. Eidam, M.D., Lawrence, Mass.

CHOOSE A MODERATELY HEAVY CAR WITH A LONG WHEEL-BASE AND BIG WHEELS

My observation of automobiles began with their first appearance on Cleveland streets many years ago, but personal experience dates back about five years, when I bought a two-cylinder 18 h. p. touring car (175). My experience with that car I will not relate, because five years ago in motoring is ancient history, and because that machine was no more like the one I now drive than the Bungtown Accommodation resembles the Twentieth Century Limited.

GOING SLOWLY ON HIGH GEAR.

Last April I bought a 35 h. p. four-cylinder car (175) with baby tonneau or short coupled body. It is called a four-passenger car, but carries five comfortably, and can carry as many as will pile on. It has shaft drive, and selection type of transmission. It is said to be capable of a speed of 55 miles an hour. I never tried its speed limit but have driven it at forty miles an hour with five passengers up, which is fast enough for travel on any public highway by any one supposed to have regard for people's lives. This machine has three speeds forward and one reverse. While on the high speed one can slow down and creep along at the pace of a pedestrian, and thus, without changing gear, can pick his way through congested streets. It is claimed that this flexibility is due to an offset crankshaft and a straight line drive. I don't know why it does so, but it does it. In my daily round this machine plays with 20 to 40 miles of Cleveland's badly paved streets. Some days, with country trips, two or three times this mileage must be covered in short hours.

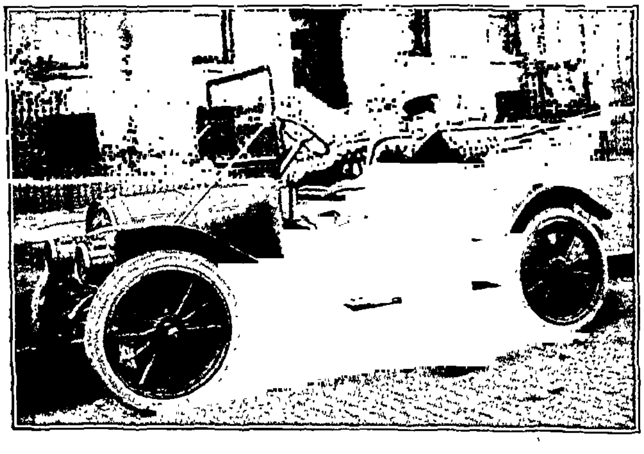

Fig. 18.—Dr. S. W. Kelley of Cleveland, Ohio, and his car (175).

ADVANTAGES OF LONG WHEEL-BASE

This machine has a wheel-base of 112 inches, and its pneumatic tires are 36 by 4 inches. I like this long wheel-base and the big wheels; and I like the short body, bringing the rear passengers forward of the rear wheels. I would not buy a short chassis or smaller wheels. Nor would I buy a light car. If I needed vibratory stimulation I would take it in some moderate and better regulated way than by riding daily in a light car. Nor do I think there is much, if anything, saved in tires by a light car that bobs about all over the road. I have driven this car more than six thousand miles on all but one of the original tires (176) and they appear good for more yet.

A GOOD WINTER CAR

This is a well-balanced car and will stick to the road and obey the wheel. I have driven it through the worst snow and ice of this wintry winter without skidding. Properly handled, these big wheels (which also insure plenty of clearance) and long wheel-base, will cross car tracks and turn at all angles on any street without skidding. The engine has run smoothly, quietly and powerfully.

Samuel W. Kelley, M.D., Cleveland, Ohio.

THE DESIDERATA FOR A PRACTICAL CAR

My original idea was to purchase a low-priced car to use until I could satisfy myself that an automobile would be practicable for me in particular. I obtained considerable service from my first car, a one-cylinder, 7 horsepower runabout (132). After using this car a year the main ideas in my mind were that I would never again purchase a chain-driven machine; that the body of the car should have protection by ample mud-guards, and a pan sufficiently large to keep the engine and transmission dry and clean. The car was not large enough to create a good appearance, and seemed overloaded with more than one passenger. My principal difficulties came from the transmission, owing to a poor design of high-speed clutch. The vibration of the single cylinder, though not hard on the occupant, was hard on the car, for lamps, mudguards, bolts, screws, etc., were gradually shaken loose.

The cooling of the engine was effected by the thermo-siphon system, which I feared might give me much annoyance by a winter freeze-up. A 50 per cent. solution of denatured alcohol entirely obviated this danger.

My second purchase was a second-hand, 20 horse-power, two-cylinder, two-cycle runabout (133), taken with something to boot, in exchange for my first car. The two-cycle engine has given almost no trouble, but consumes too much gasoline, in spite of careful regulation of the carburetor. The one great trouble I have had has been a slipping of the high-speed clutch—an intolerable nuisance. In other respects my troubles have been few, and easily remedied. If a man is to care for his own car he had best buy early certain accessories, such as a set of extension wrenches, files, soldering irons, vice, etc., for making small repairs. In case of serious trouble I have had the best results by taking the defective mechanism apart and referring the difficulty directly to the maker. On the road an extra shoe and a couple of extra tubes and spark-plugs seem almost indispensable. To me it is the delay when one ought to be riding, and clean, rather than the preparation and care at the garage where one can afford to be unhurried and dirty that make one dissatisfied with a car. I believe that the auto is practicable for the physician, and that it will become more so, for the great demand and the result of experience must produce a machine of greater and greater perfection. If I were buying again to-day I should select a shaft-driven car of medium grade and standard make, the main features of which had been tried out by a couple of years' use. I should want tires amply large, and lay very special stress on the accessibility of motor and transmission, and adjustability of wearing parts.

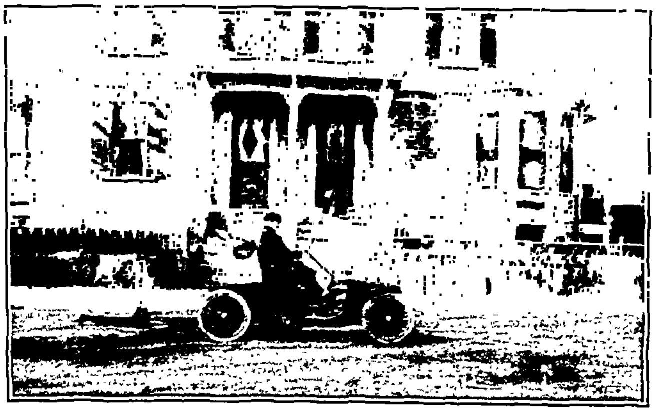

Fig. 19.—Dr. L. G. Beeley, Lawrence, Mass., in his second machine (133) described in his article.

L. G. Beeley, M.D., Lawrence, Mass.

A CLUB OF PHYSICIAN AUTOMOBILISTS

THE PHYSICIANS' MOTOR CLUB OF PHILADELPHIA

PERHAPS the first organization of its kind in the country is the Physicians' Motor Club of Philadelphia, in whose organization I had an active part. I happen to be one of the two original physician motorists (172) of Philadelphia, having been through the process of evolution of the automobile since 1898, during which year I organized the Pennsylvania Automobile Club and conducted the first regular run ever held between Philadelphia and Atlantic City. At that time the participants numbered fourteen, almost the entire motoring community of Philadelphia and vicinity. Dr. J. Sylvester Deehan has been my co-worker since the inception of the organization, six months ago.

The purposes of the club are as follows: It seeks to influence sane legislation for automobilists in general and physicians in particular. The club has no desire to seek undue privileges for the members as drivers but to have privileges which should be extended to medical men when in the performance of their duty to the community. In many states, of which Pennsylvania is one, it is only by police indulgence that the fire-engine has the right of way to save property, and the patrol ambulance the right of way to save life. Now the sum of emergency work done by practicing physicians in a city in twenty-four hours is far in excess of the emergency work done by ambulances in the same city during the same time. Of what service is the ambulance which rushes to pick up a patient to transport him to a hospital when the medical or surgical chief, on his way to administer the real service to the patient, is held up by an officer at a number of intersecting streets to allow a coal-cart or an ash-cart to pass? It is the intention of the Physicians' Motor Club of Philadelphia to have each member of the organization carry insignia on his car only when in use by the physician and to remove it or turn it at all other times. Each doctor is pledged not to exceed the legal speed limit when in the usual performance of his daily routine work. Each member of the club is to act as a committee of one to report a member who might be guilty of a constant infraction of the present law. When a name is handed in by a club member or when a member is repeatedly brought to the attention of the police department, he is requested to appear before the committee on law and ordinance who have the disposition of his case. By these stringent regulations, it is evident that any tendency to speed mania will soon succumb to active treatment.

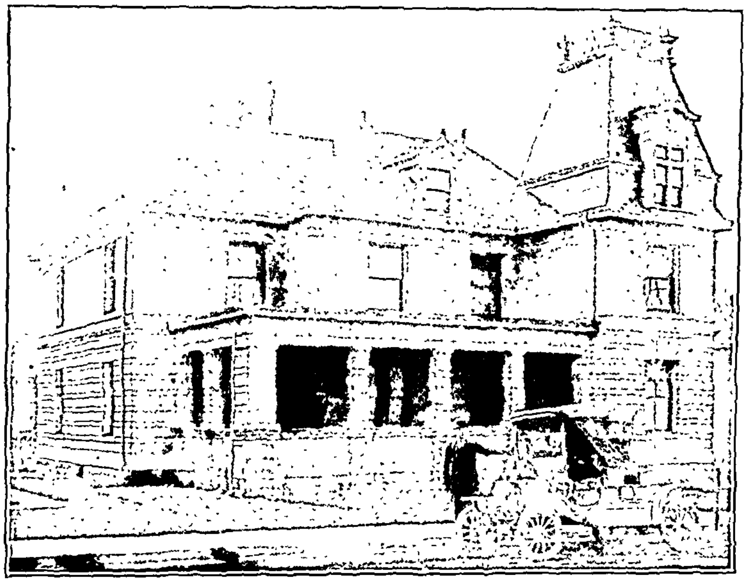

Fig. 20.—Dr. F. O. Wright, Wilmington, Ohio, and his machine (158), with his house and office in the background.

There is a time-honored custom giving the doctor the courtesy of the road, and it is the firm belief of this organization that after there has been a sufficient demonstration of good faith on the part of the members, this custom may be made a law.

The social side of the club is also taken care of and runs are being arranged for during the coming season. These runs will have the effect of letting the men get acquainted with each other and with their machines. Many medical men have the desire to enjoy the country with its relaxing influence but are timid about venturing out alone—a characteristic of all medical men.

The commercial problem is being taken care of and each member has an opportunity afforded him to learn to run a car on an economical basis if he is the driver; or if he employs a chauffeur, he can buy supplies without the help of this "trusty."

Lectures are given by mechanical men from time to time on the "A B C" of the motor car. The etiology, clinical course and treatment of all acute motor and gear diseases are discussed. The preventive treatment of mechanical and tire troubles are thrashed out; and in every way the member is placed in a position which makes him master of the motor car which has become part of his business outfit.

The club, as an organization, takes no part in the buying of supplies or sundries, but arrangements have been perfected by which a member can buy all the necessaries for a motor car at the regular wholesale figure. He is also taken care of when purchasing a new car.

It is the purpose of the club to encourage the formation of similar organizations throughout the country with the ultimate purpose of an affiliation of the separate club; for "in union there is strength." A series of horn signals to be used by moving motor vehicles is being compiled, the purpose being to have them used in a manner similar to those used by vessels, in this way giving notice to pedestrians and to other vehicles, which will minimize the number of accidents and prevent many collisions.

S. LEON GANS, M.D., Philadelphia.

A LIGHT MACHINE WITH PLENTY OF POWER

FROM my experience I find a light machine with lots of power is what is needed. I have bought a 20 horse-power car (208) with pneumatic tires; it has 4 cylinders and weighs 1,100 pounds. The main objection to the solid-tire machine is the slowness. A busy man cannot spare the time which the solid-tire car requires; and a pneumatic will go when any machine ought to go. I find that my car does not consume half as much gasoline and oil as did the other machine. My work is all in the country and I find it more convenient and profitable to hire a team when the automobile cannot make the trip. I would advise a prospective buyer to get a good machine, the best his pocketbook will allow. I made a mistake in getting the high wheeler and cannot recommend it for a physician's use.

C. O. NELMS, M.D., Herscher, Ill.

THE MOTOR CAR BOTH A LUXURY AND A NECESSITY

MY MACHINE (158), purchased last April, has been both a luxury and a necessity. It can easily do the work of three horses, and its use has enabled me to take pleasure trips that would have otherwise been impossible. Comparisons are no longer odious, given a good machine, the owner familiar with its mechanism, and willing to soil his hands occasionally, to make needed adjustments and repairs. Any one who listens to the agent's story that his particular machine is "fool-proof" will be sorely disappointed.

The physician's machine should have 32 by 3½ inch wheels, base 100 inches, water-cooled four-cylinder *en bloc*, not less than 20 horse-power with the elimination of all unnecessary weight. Avoidance of "speed-mania" will add years to the life of the machine.

F. O. WRIGHT, M.D., Wilmington, O.

AUTOS IN EVERY PART OF THE COUNTRY

AUTOMOBILES IN WYOMING

FROM 1902 to 1906 I practiced medicine in the Carolinas. On account of the nature of the territory, I confined myself entirely to horses, for automobiles had not then reached their present stage of efficiency. Even now, I doubt whether a machine would be practicable there. Certainly it could not be used exclusively, for off from the few main thoroughfares that have been macadamized, the frequent rains combine with the red clay soil to form a sticky mud, hub-deep for a third of the year.

Early in 1907 I sought health for my family in the "golden west." We traveled for some months in several of the Western states, but chiefly in Colorado. In that state we used an automobile to a considerable extent, and found the roads excellent, and an automobile entirely satisfactory.

In Wyoming we found climatic conditions ideal for our purposes. I found a suitable location in Wheatland, a town of 1,500, the center of a large territory. The radius of my practice is about a hundred miles, so that the question of a method of transportation quickly became paramount. In the early part of 1908 I was using six horses to do my work. It was then that I decided to try an automobile.

My knowledge of automobiles was exceedingly limited, but I have a liking for mechanics and some skill along that line. In Denver I purchased a car which a chauffeur ran with me through the country to Wheatland, but even his skill could not hide its two main defects, lack of road clearance and deficient horse-power.

For the summer I disposed of my horses and during that time my troubles were legion. I cannot remember that I ever ran my machine for one whole week without having enough trouble to last a man six months. Presently I was forced to purchase two horses, as my livery bills were enormous. I used the machine about town and on selected trips, when it seemed to be in the notion of running (I say "notion," for that auto appeared as animate and perverse as a balky horse). Something was always going wrong, and the machine has cost me $50 a month since I have used it. During the winter I have abandoned it entirely, going back to horses, and have been more comfortable in my mind if not in body. I have not given up using an automobile, however, for since making a thorough investigation, I have decided that hitherto I have owned a junk wagon and not an automobile.

I recently purchased in Denver a four-cylinder, 35 horse-power car (137), equipped with roadster body; and I am satisfied that this one will do what the other one did not. Still, in this territory there are certain trips that it is useless to undertake with the auto. Very often the road for 50 miles will be admirable, and then one comes to an unbridged stream, a gulch or a sand-draw that is impassable, and the nearest ranch-house may be from 10 to 30 miles away. In this connection, let me say that I would not recommend an automobile to any man in this country who was not himself something of a mechanic. Often, my troubles have occurred when I was twenty miles from help, and I would have been in an embarrassing predicament, could I not have done my own repairing.

I do not see that a machine has greatly increased my income or that it is in itself much of a saving. At least two horses are a necessity all the time, and during the three bitterest winter months horses alone can be depended on. Still, during the summer, it saves the busy man much valuable time, and one machine can do the work of six horses. Moreover, in this country, where help is scarce, the busy physician is saved time in his farmyard as well as on the road. Where a hostler is not to be had it takes a good deal of one man's time to look after six horses and their road equipment. Also it is a satisfaction to patients as well as to oneself to have the doctor within easy reach in case of emergency. The rest and relaxation, too, in driving a machine, is not a factor to be despised by a busy man. Nothing so quickly brushes from your mind the worry of your cases as the ribbon of road before you and the rush of wind in your face.

For a year my machine was the only one in town, but now there are twelve. Of these, only four have stood the test of our rather peculiar conditions: three 35 horse-power cars (138) and one 45 horse-power (139). The high-wheeled machines have not proved themselves here, nor has anything except a low-wheeled gasoline car. From my experience I would advise a medium-priced, medium-weight roadster, with particular attention given to road-clearance and hill-climbing ability, and with power enough to plow through deep sand and face the heavy winds of our breezy springs.

F. W. PHIFER, M.D., Wheatland, Wyo.

THE AUTOMOBILE IN THE MOUNTAINS

BEFORE deciding what kind of a motor car he is going to buy, the physician should take into consideration the condition of the roads in his neighborhood and whether he intends to use the machine all the year round or only during good weather. I have had five years of experience with the automobile and so far as I know am the only physician in central West Virginia who uses one in his practice. Our roads in this part of the state are very poor, even at their best, and during the winter months they got almost impassible for all wheeled vehicles. Until last September I used a low-wheeled runabout (183) which made good only during the summer season. I had much trouble with the pneumatic tire.

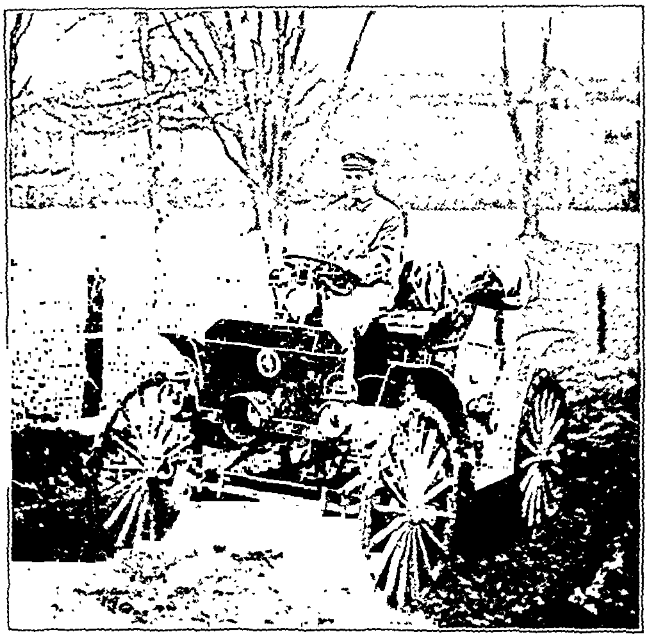

Fig. 21.—Dr. Beer climbing a "stiff" grade through West Virginia mud in his motor buggy (184).

The first of last September I bought a 20-horse-power friction-drive motor-buggy (184), which has 74-inch wheel-base and 38-inch wheels shod with 1⅜ solid tires, and is solidly built throughout. It has given me good satisfaction. I have run it every day since that time and it has not failed to go over the roads, no matter how steep the hills nor how deep the mud or snow. My expense has been about 3 cents per mile, counting everything. In my opinion there is no automobile made that can beat a good motor buggy for all-the-year-round hard usage such as vehicles receive in this part of the country. My machine rides as easy or easier than any low-wheeled pneumatic. It makes some noise, it is true, but that is nothing compared with the noise made by the owner of a pneumatic when he has a puncture some dark rainy night on a muddy road with a case of renal colic waiting at the other end of the road.

OSCAR B. BEER, M.D., Buckhannon, W. Va.

age amounting perhaps to one-sixth or one-eighth of that covered by the car this past year. Using a car strictly for business, I am sure that the cost of up-keep could be reduced by two-thirds, since the cost per month for the past four months, when no touring has been done, is $4.

The total cost per mile during the life of the car I have estimated at seven or eight cents: this includes first cost and up-keep; a rather high figure at first thought; it is not a difficult thing, however, to establish the fact that a horse in most cases will exceed this, taking into account first cost and maintenance.

From the standpoint of economy, therefore, the argument is decidedly against the horse, and I should regret very much to go back to that agent. Aside from the economy in dollars and cents, the wear and tear physically and time saved are not unimportant considerations; a night-visit is no longer a nightmare.

THE BEST MEANS OF RECREATION

To those to whom the automobile appeals, nothing surpasses it as a means of pleasure and recreation; there is a fascination in driving a car; one forgets cares and worries; it affords opportunity to explore new roads, enjoy new scenes, and experience a variety of pleasures, and if difficulties are met and emergencies arise now and then, they merely serve as part of one's motor education.

During the summer months the week always found us planning a trip for Sunday afternoon, and during the vacation period we went for all-day drives on Sunday, eating our lunch by the roadside, under the shade of a tree, unconscious of the existence of doorbell or telephone. Longer trips took us into other states; the most enjoyable one was through central Kentucky, where we visited Frankfort, Lexington, Georgetown and Paris, driving over the most delightful roads in the world, made of rolled stone and in many instances oiled for miles.

CLEANING CAR WITH WASTE INSTEAD OF WASHING

I have cared for my car for the most part myself. The sooner the owner acquaints himself with the mechanism of his car, the more certainly will he be able quickly to diagnose troubles, which is often necessarily done by process of exclusion. He should therefore keep in mind the most frequent sources of trouble. The necessity of frequently washing the car may be obviated by using waste, saturated with kerosene, being careful not to mar the paint; I know of one man who always has a clean, neat-looking car which has been washed but once in two years.

My car at first was not equipped with a magneto. I soon found the necessity of installing one, at a total cost of $62 (this is included in equipment, not up-keep). Most 1910 cars are equipped with this important adjunct; it is a *sine qua non*, and eliminates one of the most frequent sources of trouble. Late models are also equipped with improved oiling devices controlling the oil supply, thus obviating trouble from this source. The best remedy for carbonized motor is to close the valves on the two front cylinders, and when cool, to fill through priming-cups or plug-caps, with wood alcohol; then to close cups, and after four hours draw off with a grease gun, which has a slightly curved nozzle, and in the same way to fill the back cylinders, using the same alcohol, allowing motor to run idle after drawing off.

On one occasion, when I was at least one hundred miles from home, my motor began to knock when on level, in which case I used four ounces of wood alcohol in each cylinder, turned the crank over a few times, and after three-quarters of an hour proceeded. Whisky would answer and could be procured from most farmhouses. A small leak in the radiator may be temporarily stopped with a handful of corn-meal or flax-seed meal. The cylinders should be primed only with gasoline. The better way to start the motor in cold weather is to pour a tea-kettle of boiling water over the carburetor and intake-pipe. The most satisfactory oil (145) sells at 41 cents a gallon. Thirty by 3 tire chains may be made at home at a cost of $3.75, and require 23 feet of galvanized triumph chain, and 20 feet No. 3 German coil chain, six dozen "S" links, and four wire snaps.

THE CAR TO BUY

In purchasing a car give preference to four-cylinder motor 32-inch wheel, long wheel-base, sliding gear transmission and cone clutch. By all means specify a magneto, high tension type which eliminates vibrating coils. See also that there is improved oiling device.

There are one and two cylinder low-priced cars on the market which give fairly good service in good weather and on good roads. It is better to pay a little more, however, and get a car with more power than is actually needed. At $750 there are two cars in particular which I have in mind (146 and 147), which for every-day runabouts answer all practical requirements. Up to $1,050 one may have choice of a variety of cars which will give satisfactory service, and outclass the $3,000 car of six years ago.

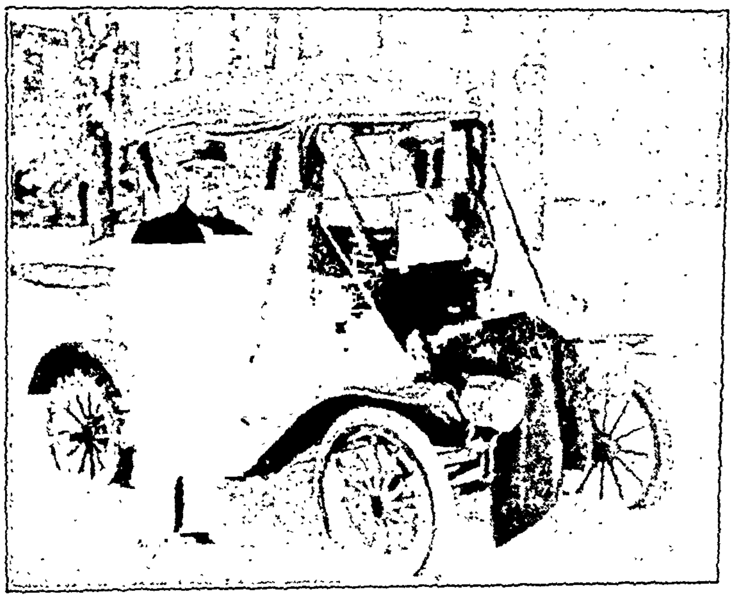
Fig. 25.—A winter scene in Indiana. Compare this with the picture on the opposite page. This car (144) is driven by Dr. C. R. Bird, Greensburg, Ind.

Automobiles now are well standardized, and improvements are largely in refinements rather than in principle. Some one has said, "But, after all else has been said, one significant fact towers above all others—that at no time in the history of this wonderful industry has there been so much similarity between cars regardless of the price."

Eternal vigilance is the price of an ever-ready, perfect-running car.

Charles R. Bird, M. D.,
Greensburg, Ind.

SIX YEARS' PRACTICE IN A LIGHT CAR

Just how long an automobile will last under careful driving and proper handling has yet to be determined, for the worn-out parts can be replaced like the parts of a jackknife as they give way and one can go right on using the original form indefinitely if one so chooses. After a certain time, however, the machine will be in the shop more than usual from old age, and parts will become crystalized and dangerous to use.

HOW LONG WILL IT LAST?

The life of an automobile is largely determined by the power of its engine. An engine of power too high for the machinery is like a hypertrophic heart: it cuts short the life of its carrier. The speed craze on the part of the driver, if indulged on our American roads, will in a very short time wreck the best of cars. Nothing can be more disgusting than to see a physician afflicted with the speed craze. A good test for sanity would be this: Do you enjoy riding in an automobile faster or slower than twenty miles an hour?

UP-KEEP OF HEAVY VERSUS LIGHT CAR

As to cost of up-keep, no one with experience in running cars will doubt for a moment, I think, the advantage of the light car over the heavy one. Tires still continue to be the chief item of expense, and a heavy automobile will wear out its heavy tire long before a light car will wear out its light tire, and there is the extra cost of replacing the heavier tire besides. A physician does not need a heavy car for his work. If he wants it for other purposes, well and good.

In the summer of 1903 I purchased a curve-dash one-cylinder runabout (181) and used it constantly in my practice for six years. Last summer I sold the car and purchased a two-cylinder runabout (182), largely because my first one was out of style. My present car is rated at 12 horse-power and weighs about 1,200 pounds. It is somewhat heavier now, for I have had a canopy top put on it. This top changes the appearance of the car from that seen in the illustration to an automobile of the heavy type. The wind curtain in front protects me from the cutting breeze and side and back curtains with their celluloid windows will give a coupé effect and warm quarters. My engine drives the added top against our heaviest winds easily enough. I run my car now very much like an electric, which I consider the ideal pace for an automobile.

A large item in expense is saved by the owner diagnosing himself any trouble his car may have and requiring of the mechanic simply his time for the treatment. Any one who has a mechanical turn of mind will enjoy overlooking his car for any trouble that may be impending, and he will do this often; and he will enjoy driving his own car as well. He is not covered with the germs or odors of the horse when he uses an automobile in his practice.

EXPENSE LESS THAN BOARD OF HORSE

I kept an accurate account of my expenses for six years and found when I kept my car at home they were, all told, less than the mere board of a single horse in the livery stable, while the car would do the work of two horses. The day of the automobile for physicians is at hand and his car is the light one.

M. W. Ward, M.D.,
Woodland, Cal.

Fig. 26.—Winter scene in the Sacramento valley. Compare this, with the picture on the opposite page. Dr. and Mrs. M. W. Ward ready to start from their garage, Woodland, Cal. (Auto 182.)

THE BETTER WAY

Whether a physician finds an automobile preferable to a horse seems no longer debatable. Changed conditions incident to the practice of medicine make it impracticable to try to do the work of a large practice without a machine. The older physician who would care for the second generation of patients finds them living so far from the parental roof that an automobile is indispensable. The young physician requires all the time available to keep pace with the progress of his art.

SAVES TIME AND HOLDS PATIENTS

The ability to hold patients who otherwise would have to be relinquished, the gain in availability to the patient at his home and punctuality in the observance of office hours are elements that cannot be computed. "The time on the street" represents the doctor's lost hours. It is reasonable to estimate that for the man who travels over a considerable territory the automobile saves three hours daily. And one medical man facetiously observes that we waste half of this time talking over the relative merits of our machines.

In addition to saving time and so increasing a doctor's earning power, the automobile has proved a boon to the medical man along other lines; the greater protection it affords from exposure, exhilaration in driving, and last but by no means least a hobby for his idle moments.

SELECTING A MACHINE

The selection of a machine is much simplified by considering the two possibilities. The product of a firm with a complete plant for producing all of the essential parts of an automobile, and having them perfectly standardized; or the product of a plant which is in reality an assembling depot for the parts secured from many makers who have thus no personal responsibility in the completed product.

Almost any machine will give the worth of the price paid; some will give a great deal more for the money invested. The poorest automobile of to-day is better than the best of a few years ago.

FACTORS LESSENING UP-KEEP

The expense of maintenance is largely a question of the driver and the caretaker. The private garage will greatly reduce the items. A few of the factors in lessening the up-keep are:

A good equipment.

A clean machine.

Good oil constantly where it should be.

Periodical search for needed repairs.

Prompt repairs.

Tires of ample size and properly inflated at all times. Power and speed suited to the work being done.

Buying supplies at the right prices, preferably in large quantities.

Avoidance of grand-stand starts and stops.

Remembering that short turns and curbstones shorten the life of the tires.

A private garage.

USE AND REPAIRS

During the past year I have driven my 30 horse-power car (108) 7,132 miles with only one puncture, one from a nail which plugged the hole so that I was able to drive home. My tires have averaged about 5,000 miles. The spark plugs have never been removed. No work has been done on the engine except to renew some of the hose on the cooling system.

A trip to Maine and back, via the White Mountains, without trouble with any part of the machine, demonstrated the possibility of service and pleasure to be had from an automobile

My expense item has included the following items:

Gasoline	$79.74
Oil	5.29
Grease	3.70
Parts	2.94
Recharging storage batteries	3.00

B. Franklin Stahl, M.D., Philadelphia.

THE COST DEPENDS ON THE OWNER

My earliest experience with horseless vehicles was with a tiny curved-dash, one-cylinder runabout (150), which, according to its makers, "cranks from the seat, is seen wherever you go and goes wherever you see them." Two years' use of this machine was expensive, if calculated on a basis of mileage traveled, and in a way justified the remark of a critic that "it cost one dollar for each mile you see it going." That was, however, a criticism not taken too seriously, for those were pioneer days in autoing; one must learn auto mechanism sooner or later, and it was no doubt better and cheaper to learn on the small car.

My next venture was a 4-cylinder *air-cooled* physician's runabout (151). In 1904 this car was reckoned a powerful, reliable, noiseless and handsome professional carriage. I ran it every day, winter and summer, for nearly five years, mostly over the well-paved level streets of the city. It is still in daily use, runs better, I believe, than when new, and should, with proper care, prove an efficient city runabout for another five or more years.

I have recently acquired another car (152) which I selected because this particular type of car appealed to me most in points of moderate weight, apparent perfection of construction, and because of the guaranty of the makers.

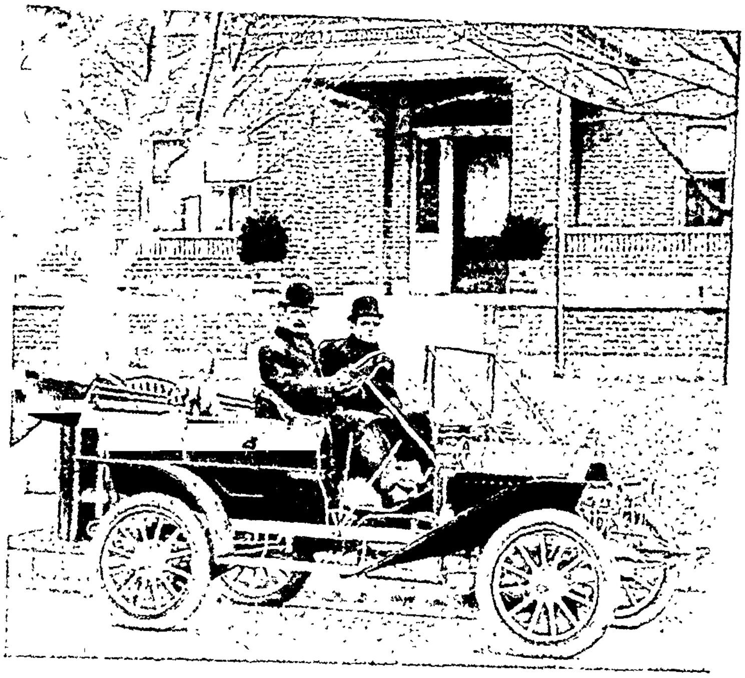

Fig. 27.—Dr. John F. Barnhill, Indianapolis, in his car (152), with Dr. Paul B. Coble, in front of Dr. Barnhill's residence.

But what interests physicians most, perhaps, is the truth about the cost of maintenance and operation of self-propelled vehicles. I have already stated that my first experience was expensive beyond reason, largely, no doubt, because I knew nothing of auto mechanism and because the earliest autos were experimental. The five years' operation of the second car was at an expense, excluding gasoline, oil, and tires, but including an annual painting, of not to exceed $500. During this same time oil, gasoline and tire replacement cost $650. The car itself cost $1,425, making a total of $2,575 expended in five years. Counting the old car still worth $300, this makes a total average expenditure for auto transportation of $455 per year.

In cost of auto maintenance there are two classes of owners who give widely different figures:

1. The one whose outlay is unreasonable and prohibitive. Such an owner, it will usually be found, has been a victim of the following errors: (a) buying a car without reference to the use to which it will commonly be put, in other words the use of a runabout for too much touring, or a touring car when runabout use is chiefly desired; (b) carelessness as to proper tire inflation, lubrication and use of anti-freeze solutions; (c) the owner's employment of a cheap and worthless chauffeur instead of driving the machine himself; (d) reckless driving, especially over roads never intended for an auto; (e) going to the repair shop for the nine-out-of-ten disorders which every owner should be capable of quickly adjusting himself.

2. The owner who is satisfied that the automobile is an economical proposition. Such an owner (a) has selected a car to meet the particular requirements to which he will put it, as well as one suitable to the environment as to the roads and hills; (b) drives the car himself, and with reasonable care, knowing that abuse and lack of proper attention to the machine are expensive faults; (c) studies auto mechanism to the end that he can diagnose his auto trouble at once and thus be able to correct the numerous little "tricks" which even the best cars play, and thus avoids the expensive repair man, except when some actual break of part has occurred; (d) uses the best and most suitable grades of oil and gasoline, and the best obtainable system of ignition, to the end that carbon in the engine is avoided, and the greatest possible amount of power and mileage may be obtained from the fuel consumed.

Any owner can, obviously, make either an expensive luxury of his automobile, or he can, if economy of operation is necessary or desirable on his part, cut the expense to a point that auto transportation becomes the cheapest available means of travel. But aside from cost, the pleasure derived from the rapid dash from place to place in a business way, or the invigorating spin to the country with one's family or friends after business hours, must be counted well worth while, even if the cost at times seems a little more than that paid by our grandfathers for the ox-team journey, or by ourselves a decade ago, behind a team of thoroughbreds.

I might also add to the above that I have maintained, for family use, a coupé electric car (153) for the past fifteen months. I keep this in my own garage, and charge from my own outfit installed for that purpose, and the expense of maintenance so far has not seemed unreasonable; and yet, when compared mile for mile with the gasoline machine my experience is that the electric costs twice as much as the gasoline conveyance. John F. Barnhill, M.D., Indianapolis.

MODERNIZING A 1908 AUTOMOBILE

Every mother admires her own babe most. Every automobile maker brands his product "best." Every auto owner thinks *his* particular machine is really "it." But we must admit that "there are others." There is no sense in my saying, just because I own a runabout (187) which I think is absolutely "O. K.," that it is the best machine in the market to-day. I realize that there are others just as good.

THE LIGHTING SYSTEM AND THE BATTERIES

But what concerns me just now has to do with this car. When I bought my machine in July, 1908, it was furnished with few accessories. I set about at once to put on the things that I liked best. Beginning with the lighting system, a headlight (188) was installed on a pivot bracket on the inner side of the dashboard so that I was able to swing the light around a corner, or up against a street sign. Many a night it has come in handy when looking for a particular house number. This headlight burns gas furnished in tanks (189). The side and tail oil lamps were exchanged for electric lamps run in connection with the storage battery. But one night I forgot to turn off the battery supplying the lights, and when I came out from seeing a patient there was not enough life in the battery to get me home; hence the change back to oil lamps.

Every one knows what troubles are caused by weak batteries. So disgusted was I that I took out the battery and the dry-cells and put on a magneto (196). Since that time (July last) I have been entirely free from battery troubles. The machine starts on a quarter turn of the crank, and furnishes a strong rich spark.

THE TOOL-BOX, TRIMMINGS, ETC.

Those readers of this article who own machines like mine know what an ugly tool-box is provided. Mine soon warped and allowed the tools to get wet every time it rained. Since it occupied plenty of space I saw the possibilities. A carpenter made me a box sufficiently long and wide, put on top irons and placed it on the rear. Now, thank you, I have a rumble seat for a third passenger and a dry place for tools.

I never could understand why there is so much brass on autos. Nothing is so dirty as dirty brass. Rather than have a porter stand over it all the time, I had it all painted black. I have not regretted the change.

I have found that "spring-washers" will keep a bolt tight when nothing else will; that heavy grease in the differential will keep the rear wheels clean from spattering oil, because it does not liquefy like thin grease; that an extra inner tube and casing saves much irritation; that a priming cup on each cylinder-head will allow me to put gasoline directly into the cylinders to make the machine start more easily on cold days; that a few drops of kerosene oil dropped into each priming-cup will keep the cylinders clean; that one-third each of glycerin, wood alcohol and water stopped all freeze-ups, and that an extra two quarts of oil and gasoline, and an extra magneto belt and an oiler belt are most indispensable when I least think of them.

SERVICE AND EXPENSE

It is truly remarkable what punishment these small machines take and stand up well under it all. I went to Milwaukee from Evanston one Saturday forenoon, a distance of 90 miles, in six and one-half hours, on three gallons of gasoline. I have run the machine almost every day for eighteen months in all kinds of weather, and over all kinds of roads. It has carried me over 10,000 miles. The only thing that broke was a fender-iron, and that was replaced at a blacksmith shop for 75 cents.

It may be of interest to know what has been the expense to me since I bought it eighteen months ago. Well, in the first place, I keep the car in my own garage. It is 12 by 18 feet and 10 feet high, 2 by 4 uprights with 2 by 6 rafters. This is covered with corrugated sheet metal, painted and a sliding door hung on the alley side. The floor is of ashes. Since the item of garage expense is cut off, and since I buy my oil and gasoline at wholesale, you see that I am ahead of the game at the start. My whole automobile expense per month is $19.32.

I am in favor of the small runabout car for city use, because while allowing the maximum speed permitted, its up-keep expense is the minimum. Why drive a four-horse team about when a single horse will well do the work? I have found that a small car uses far less gasoline and oil and is the lightest on its tires. These three items being small, the cost of running the car is correspondingly small. I have added to the equipment as follows: wind-shield, top, rumble seat-tool box, magneto, carburetor (190) (haven't had to adjust it since it was put on in July, 1909), headlight (188), bigger gasoline tank, holding twelve gallons under the seat, small trap-door on top of the hood to allow immediate access to the priming cups, and a meter (191) to measure the miles.

Taken all in all, I venture to say that I have a car that compares well with many a larger and more expensive car from the standpoints of usage, expense and convenience.

As to using a horse, I would not ride behind one except to a funeral. John A. Kappelman, M.D., Evanston, Ill.

TROUT STREAMS AND HUNTING GROUNDS BROUGHT WITHIN AN HOUR OF THE CITY

Until a year ago—that is for twenty years—I have driven horses. Then I sold my rig and bought a touring car (148). I would not return to the horse. A machine is cheaper to maintain, can be left without hitching, does not get frightened, is under perfect control, does not get sick and does not have to be exercised when not wanted for use. It is warmer in cold weather and vice versa. A greater extent of territory can be covered by the machine and, to me the greatest desideratum is, that one can get out of the city in an hour to the country, trout streams and hunting grounds, and enjoy a few hours of unalloyed bliss, or with his family ride over new routes and enjoy new scenes.

I take entire care of my car. I have taken it all to pieces and put it together again, and it runs perfectly. An automobilist should know his car as a driver does his horse. Some people never learn to drive a horse properly and some people can never learn a machine perfectly, those are the kickers.

As to expense, I am $25 to the good over the horse for one year and I have had many times the enjoyment and mileage. A. S. Bolster, M.D., Worcester, Mass.

TAKE CARE OF YOUR AUTOMOBILE

If you have owned and operated your own car for seven or eight years don't read this little article, for you know as much about it as I do. It is for the benefit of those who are new at it that I am writing these few words. One of my greatest enjoyments in motoring is in taking care of my own car (121), so I say, if you can possibly find the time, take care of your own machine. You will find it a pleasure and an economy at the same time. No matter how trustworthy he is, the other fellow is sure to be more lax than you yourself; he will throw away the extra gasoline rather than save it to be used for cleansing, or what not, he will throw the hood open with a bang instead of laying it back, and so forth.

Briefly, my advice is as follows: When you come in from a run, or at the end of the day, wipe off the body with some waste; this will do the varnish a world of good where frequent washing will do just as much harm. Open the hood and clean the inevitable grease, dust and dirt from the engine, fan, carburetor and piping. By doing this the power plant always looks neat and you will not ruin a clean shirt or coat in trying to make a hasty adjustment that may be necessary when starting or when on the road. Fill your water, oil and gas tanks, thus avoiding irritating, exasperating delays on the road which can only be charged to your own carelessness. See that the grease cups are filled, and where these are not provided put a few drops of oil, looking, meanwhile, for any loose nuts or bolts. Your machine can run without these, but you don't want it to do so. Frequently, and I believe once a month is none too often, jack the car up and examine all four wheels for loose bearings. By doing this you may avoid large repair bills and enforced idleness for your car while a new set of bearings or even a new axle is being installed. Keep your tires hard. You will get more speed and more mileage for your trouble. These things attended to, your car is ready for starting at a moment's notice, at any time of day or night.

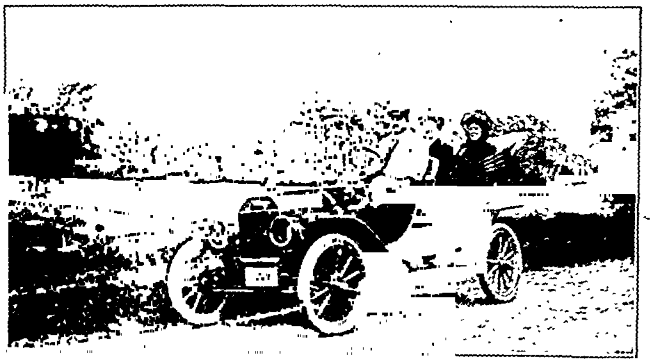
Fig. 28.—A country pleasure ride in a touring car (148) driven by Dr. A. S. Bolster, Worcester, Mass.

When on the road, follow the golden rule, "Do unto your car as you would have your car do by your pocketbook." Feel for the machine; it cannot feel for itself. Use common sense when starting and stopping, doing both gradually. Nothing will do the transmission so much harm as overlooking this easily followed suggestion. Go as fast as you may care to ride on a straight smooth road, but slow down for the many thank-you-ma'ams which invest city crossings, or a broken spring may be the penalty. Do not turn a corner at twenty miles an hour when you can do so at ten, besides, the latter is better for you (mentally, morally and legally) and for the frame of the machine. To get best results open and close the throttle gradually.

To conclude: If the engine worries along on only three cylinders, fix it immediately yourself, for you can do it just as well as to pay a repairman sixty cents an hour to tinker for you, and too often that is his stock in trade. Use deduction, the Sherlock Holmes kind, and you can diagnose and successfully treat your case nine times out of ten.

T. Albert Peppard, Minneapolis.

OPERATION OF FOUR-CYCLE AND TWO-CYCLE ENGINES

The life and the energy of the gasoline automobile lie in the engine or motor, located beneath the hood in front of the dash and connected to the rear wheels by transmission gears, rods and chains. To build a motor for this purpose with a maximum of efficiency, durability and economy, with a minimum of mechanical detail, replacement and care has engrossed the attention and demanded the scrutiny and study of the world's engineers, and to this end, the four-cycle and two-cycle motors, varying considerably in their own individual arrangement, have been gradually developed and perfected.

ANALYSIS OF OPERATION

Within the cylinder of every gasoline engine four operations occur consecutively:

1. Intake of the charge.
2. Compression of the charge.
3. Explosion of the charge.
4. Removal of the burned gases or residue.

In the four-cycle type (Fig. 29, A) each of these operations is represented by a stroke of the piston. At the first or downward stroke, the vacuum produced draws the charge into the cylinder through the inlet valve, automatically opened at the time; following this the inlet valve closes and the piston returning, compresses the vaporized gasoline into approximately one-fourth the cylinder space. At the end of the second stroke explosion of the compressed gases takes place, and under the generated pressure the piston again descends, delivering the mechanical power. The exhaust valve, timed to open now, or at the beginning of the fourth and last stroke of the cycle, permits the emptying and cleansing of the cylinder during the entire ascent of the piston.

In the two-cycle motor, aspiration, compression, explosion and exhaust of the gases are obtained in only two strokes of the piston. This is made possible in that with every downward stroke a power impulse is given, and at the same time, through the piston's descent, precompression in the crank-case or in an annexed chamber established; while with every upward stroke, a fresh supply of gas from the carburetor is drawn into the crank-case and also compression of the charge within the cylinder accomplished. For this reason it is called the two-stroke-to-the-cycle engine, or for short the two-cycle engine.

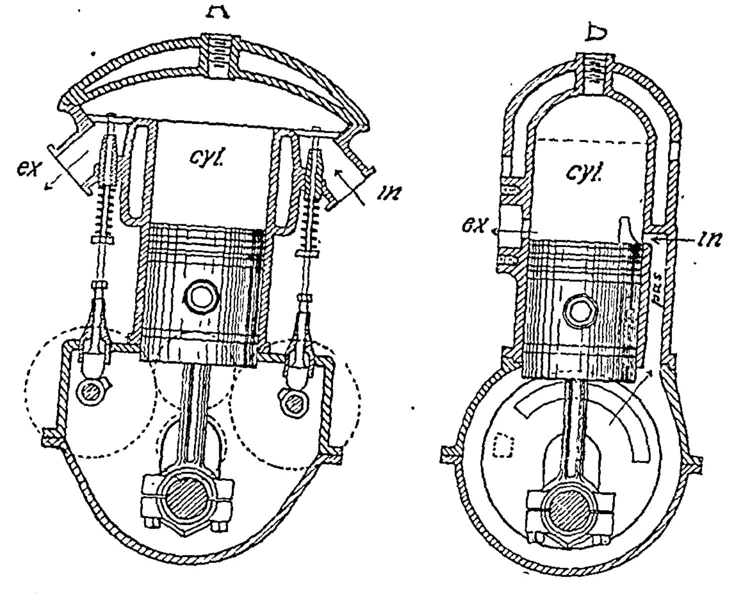

Fig. 29.—A, type of four-cycle construction; B, type of two-cycle construction. The details are explained in the article.

In Fig. 29, B, the cylinder, "cyl," is represented as filled with a fresh charge; on ascent of the piston compression and ignition follow which drives the piston toward the bottom of the cylinder, and the burned gases begin to make their escape through the exhaust port, "ex." A moment later the piston, descending to its lowest level, uncovers the inlet port, "in," and admits the compression charge from the by-pass "pas" and the crank-box. The inrushing and expanding charge completes the scavenging of the cylinder, but is deflected in such a manner as to allow little or no mixing of the gases.

It is claimed then for the two-cycle engine that it will perform the four operations in one-half the time occupied by the four-cycle, that it does this without the intervention of some fifteen to eighteen parts of valve-lifting mechanism to the cylinder, and that with double the impulses smoothness in operation together with 50 to 60 per cent. of additional power is obtained.

I drive a runabout (197) with a two-cycle engine and find it satisfactory.

James B. Baird, Jr., M.D., Atlanta, Ga.

IT'S WORTH THE DIFFERENCE

Regarding the use of the motor car by the physician my conclusions are based entirely on my own experience; that is, the experience of a country physician who is obliged in the course of a year to drive from 8,000 to 10,000 miles in a locality where good roads are the rule. I may state that my experience has been long and varied, for I have used a motor car since the early days of the automobile industry.

A PIONEER USER

I purchased my first car in 1899, and after more than ten years of constant use of motor cars in my business I am a firm believer in the automobile as a paying proposition for the country doctor. Does it cost more to operate and keep it in running order than it does one horse? It certainly does, but the comparison is unfair, the two are so entirely different.

SAVES MONEY BY SAVING TIME

A motor car will do the work of all the horses one man could find time to drive, and do it in one-half the time. If one's time is worth anything the motor car is certainly a great money-saver. Estimates of the comparative cost of keeping up autos and horses are often very inaccurate. We are too apt to base our opinion on the first year's use of the automobile, when repair and tire bills are generally small; if we do so the account will be favorable as compared with the expense of keeping horses. Repair bills will increase with the age of any car.

I am unable to state the actual cost of operating, repairing and depreciation in value of the various cars I have used in the past ten years. I once kept account of expenses for a short time, but it made me feel guilty. I felt as I would were I to keep account of the expense of being married. Supposing it does cost more to run the motor car than it does to drive horses: isn't it worth it? It permits you to spend more time at the office and catch an occasional stray dollar, that fracture case didn't go to some one else because you were not in—and it is such jolly fun to be bowling over the road on a hot, sultry day when you would feel sorry for the horses you were driving. All this is worth the difference in the expense.

HIS RECORD OF CARS

My first car was a steamer, one of the first ones sold by that concern (154), of narrow-gauge tread with a fire-tube boiler about as large as a good-sized teakettle. This little car would be considered a mere toy to-day; the burner had to be generated by a piece of bent gas-pipe heated in the kitchen stove; it reads like a joke now, but it wasn't in those days. It sometimes did run and it made more stir than any car I have owned since. It took a brave heart and a great deal of patience to go out on the road when every horse attempted to climb the nearest fence and every driver "cussed" that devil-wagon. My second car (155) was also a steamer and was quite an improvement over the first. My third car, a two-cylinder gasoline car (156), made the remarkable record of covering 52,000 miles in the six years of service. My present car (I never dreamed cars would be so perfect) is a four-cylinder 20-horse-power car (157) of the heavier type. It has covered 3,800 miles since August with virtually no trouble or expense, but next season there will probably be repair bills and new tires, but what of it? Were I obliged again to use horses in my business the year round I believe I would throw up my job.

E. Windmueller, M.D., Woodstock, Ill.

RELIABILITY THE DESIDERATUM IN AN AUTO

SOME years ago I became convinced of the necessity of overcoming distance with decreased time. Still, the horse was at least sure of arriving at the destination, while machines, I had noticed, were often passed by the wayside by that faithful animal. I therefore began to look for a machine that could be depended on to reach the desired goal which would not be too expensive or too complicated and which I could understand and run, if necessary, myself.

I found what I sought after some search, and, seeing the simplicity and apparent practicability of the machine (201), I ordered one, which I have used for eighteen months at an average cost of less than $14 a month for oils, repairs, etc., with an average mileage of about forty miles per day. The past winter, because of its severity and the condition of the roads for weeks at a time, demonstrated most practically the absolute dependence which I could place in the machine. I can heartily recommend my car as being very practical for physicians, on all conditions of roads and under all circumstances. J. LELAND BOOGHER, M.D., St. Louis.

THE ADVANTAGES AND DISADVANTAGES OF THE STEAM CAR

IN THE JOURNAL'S previous Automobile Numbers I have been surprised to find so little relative to the steam car, which seems to be giving good service in this section. After close observance of the types of cars, I purchased last summer a steam car (102) of 10 horse-power, which thus far has given me excellent satisfaction. One should, before purchasing any make of car, know the pro and con of the car.

TROUBLES

A troublesome feature of my make of car, which would apply to all steam cars, is the constant refilling of the water reservoir, under the seat, which has a capacity of thirty gallons, requiring for convenience, water and hose attachments, both in the garage and in front of the office and residence. A trip of ten to fifteen miles would consume about one-half the contents of the reservoir, depending of course on the condition of the roads and the number of hills encountered, thus making it unwise to attempt like trips without first having refilled the tank, so that for touring purposes I would not select a steam car, unless I was acquainted with conditions of water along the route. Granting the presence of watering troughs along public highways, much of the trouble would be averted, since there is hose and injector attachment, that one may easily refill the tank in a few minutes.

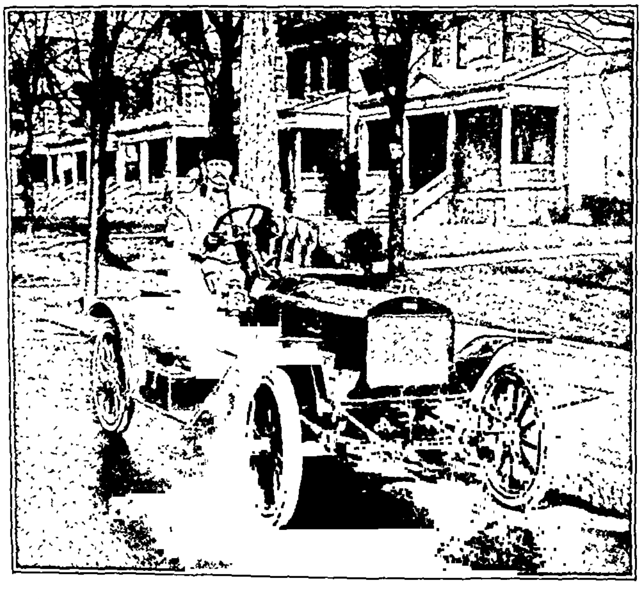

Fig. 30.—Dr. J. Leland Boogher, St. Louis, in his automobile (201).

STEAM VERSUS GASOLINE CARS

I believe one has more trouble with a steam car than with a gasoline car, but not of such nature as to detain one long on the road. The gasoline consumption of the steam car is greater than that of the gasoline car, averaging from 7 to 9 miles to the gallon of gasoline, according to the condition of the roads. The steam car should have a warm garage in winter, if it is to be used during pleasant weather, but I have yet to see the auto that will combat snow-drifts and hills such as we have here.

GOOD POINTS OF STEAM CAR

Having briefly enumerated the troubles of my car, I can say in its favor, for endurance, durability and simplicity, it is, I believe, without a peer. Trouble is quickly located. Easy access to all parts: no cranking, wires, dry cells, carburetors, magnetos and the like which trouble some, hours, nay, days as I have seen. My car is noiseless in stopping, starting and passing fractious horses, with little or no odor of gasoline, making as little vibration as possible, which, to my mind, is a big saving on tire wear. As to the time required in steaming up, will say that I can, if need be, obtain sufficient steam in ten minutes to leave the garage. I find that more practical instruction could be embodied in the company's instruction-book, which is very meager in many respects. They stand ready, however, to repair any defect in their machines, and give prompt attention to all.

A DEPENDABLE CAR

To the physician, who needs a good dependable car that will stand much rough usage for his business, and who can overlook the troublesome features mentioned, I can conscientiously recommend my type of car. I shall continue to use a steam car until I am convinced of the superiority of the gasoline car.

A. H. HILL, M.D., Mifflinburg, Pa.

COST—CYLINDERS—COOLING

ON PLANNING to purchase a piano or a watch or a static machine for long and satisfactory service, do you not go to a reliable dealer of long standing, who sells a make that has been tried and tested, that has been on the market for years, and that is recommended by those competent to judge? On the other hand, if collections are bad and you want a piano merely to fill a vacant space in your parlor, or a timepiece merely to attach to a fob, or a static machine to stand in your office for the psychic effect it may produce on your patients, a cheap product may answer your purpose.

HOW MUCH DO YOU WISH TO INVEST?

With these comparisons and illustrations in mind how much can you afford to put into a motor car? Can you spend $8,000 or $10,000? If so, buy an imported car and you will have one into which has been put the best material and construction obtainable.

If you can spend, say, from $2,000 to $5,000 for a car, there are numerous American manufacturers who have been staking their reputation on the output of their factories for half a score or more of years. Their product has been improved from year to year until at the present day a mere novice with a dozen or more makes to choose from, and with closed eyes, would make no serious blunder.

DISCRIMINATION REQUIRED IN BUYING CHEAP CARS

In selecting a car at a price varying from $800 to $1,500 more discrimination must be used. Many cheap cars are at present on the market, to which the time test has not been successfully applied. There has always been and probably always will be a demand for a low-priced car, but thinking men are being gradually convinced that with labor and material at its present price, it is practically impossible to construct a satisfactory car at less than $800 or $900. If a mere toy is wanted, simply to stand in front of the doctor's door, and to take an occasional spin on an asphalt street, there are manufacturers who will supply the demand. But touring in comfort, which is what the doctor really needs, is out of the question with such a car. Of course, in all cases, much depends on what use the car is to be put to and the personal equation of the driver.

CYLINDERS

When it comes to cylinders, men seem prone to buy them on the same principle that the patient "took his pills." If one pill was to do him good, two would do him more good, and finally he thought the problem solved by taking the whole box. At present *there are more four-cylinder cars in use than of all others put together.* The increase is notable in the last two years. They have been recruited largely from the two-cylinder class. The whole thing is summed up by how much horse-power you want your car to have. The greatest number of models at both the New York shows this year were from 25 to 35 horse-power. Cars of this horse-power should be of the four-cylinder type, but for a good common-sense car, developing from 16 to 20 horse-power and a speed of twenty miles per hour, two cylinders are enough. Experience seems to have proved that for medium power cars, say under 20 horse-power, the two-cylinder opposed is the most practical. The power furnished by an engine cylinder is in direct proportion to its cubical capacity. One cylinder with a bore of five inches and a stroke of five inches will develop 8 to 10 horse-power, while two cylinders of same dimensions will develop 16 to 20 horse-power. A four-cylinder engine with no greater combined cubical capacity will develop no greater power than the two-cylinder engine. A four-cylinder engine increases the number of parts needlessly, complicates the mechanism and increases the cost. What is the use of using four horses when two will answer the purpose? Four, and even six-cylinder engines undoubtedly have *their place;* for instance, where more than twenty horse-power is required, or where a car is intended for the transportation of five or more persons at a high rate of speed.

But from the standpoint of the average motorist, not the faddist, this same average motorist who is the mainstay of the American *automobile industry,* the 20 horse-power two-cylinder car has an advantage in simplicity of construction over its many-cylindered brother.

COOLING

There seems to be a variety of opinion among the exponents respectively, of the air-cooled and water-cooled motor. *It is a notable fact,* however, that of all gas engines used for practical purposes by far the *greater number* are water-cooled. It is also a notable fact that no great race has ever been won by an air-cooled car.

Water cooling is more reliable than air cooling under all climatic conditions. In an air-cooled motor the temperature varies with that of the atmosphere and the cylinders may, at times, become dangerously hot. To cool sufficiently with air the cylinders must be comparatively small. The motor, of necessity, works at a higher temperature. For this reason the valves do not remain tight and need frequent regrinding.

Among the water coolers, the question as between pump or *thermo-siphon* circulation seems to be no nearer a definite answer than last year, for the number who use each system is practically the same. *I am inclined to favor the* thermo-siphon system of cooling and believe that cars using this system will increase from year to year.

IGNITION—SHAFT DRIVE—BRAKES

Magnetos are well to the front. *On a large number of this* year's models both batteries and magnetos are to be found. Even on the cheapest cars magnetos are to be *found, there* being more models selling below $1,000 which have magnetos than there are that do not. There is no car at present selling for more than $3,000 that is not equipped with magnetos. There seems to be an increase in popularity this year of the *shaft-driven* car, and also of the double-brakes on the rear hubs.

David Edward Hoag, M.D., New York.

Surgeon for the Glidden Automobile Tours; Surgeon to the Brighton Beach Motor Racing Association.

AN ENJOYABLE AUTOMOBILE RIDE

For five years I have been using automobiles. I have used, for business and for pleasure, everything from a single-cylinder to a six-cylinder machine (105); but thinking that technical subjects will be well cared for by others I have chosen quite a different experience to describe.

The automobilists of the United States are organized much after the manner of the physicians. There are local clubs, state clubs and the Three As, which, as a national organization, corresponds to the A. M. A.

The A. A. A. designates a day early in the summer as Orphans' Day. The local clubs are expected to give as many orphans as possible an automobile ride and outing on that day. On the third of last June the Automobile Club of Cincinnati gave such an outing to 1,100 orphans, inmates of the various institutions of this city. The children were gathered from the various *institutions* and brought to the heart of the city, where *they were formed* into a parade, the children each being given a small flag and the automobiles were suitably decorated. As president of the Cincinnati Automobile Club it was my pleas*ure to lead this* parade, and I am sending a photograph of my car as it appeared.

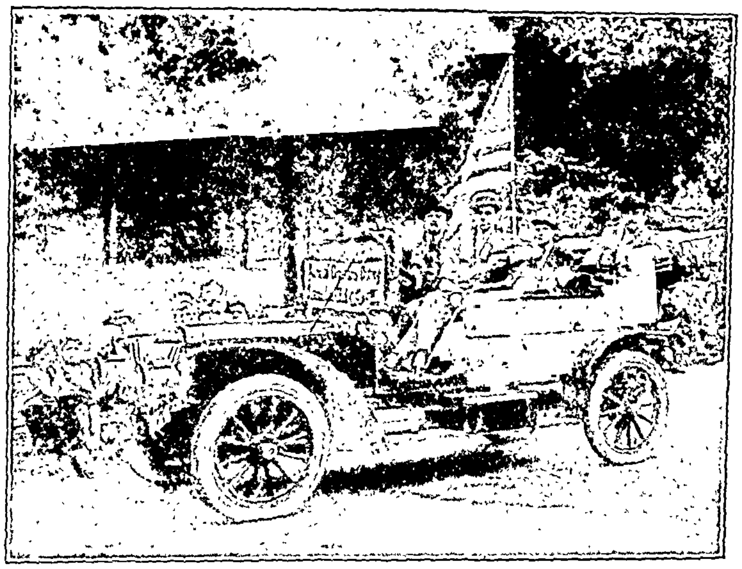

Fig. 31.—A physician cooperating in giving an outing to the orphans, an annual feature in many cities. Dr. Charles L. Bonifield, president of the Cincinnati Automobile Club is at the wheel. In the left rear seat is Mr. Rogers, superintendent of the parks of Cincinnati. (Auto 106.)

We passed through a number of the main streets of the city, then took them through the suburbs on the hill tops, stopping at Burnet Woods, one of the city parks, for a band concert. We then proceeded to Chester Park, an amusement resort, where *not* only the gates, but *all* amusements on the grounds were open to the children free of charge. It was a sight to be remembered, to see these homeless children, many of them crippled and deformed, enjoying these amusements so novel to them. They were each served with a substantial luncheon and at sundown delivered to their *institution* without a single accident having occurred to mar the pleasures of the day.

I urge every doctor who reads this and who owns an automobile to join his local club and be an active participant in the next Orphans' Day Outing.

C. L. Bonifield, M.D., Cincinnati.

THE AUTOMOBILE ADDS TO EFFICIENCY IF NOT TO INCOME

My father and I are associated and do a large general practice in a community of more than 400,000. The roads are fair for the middle West but there is much to overcome before they could be considered good. The country is very hilly and many of the roads and especially the streets are precipitous. We cover a radius of from four to ten miles, and together our mileage is about 15,000. A chauffeur is a necessity. We have three machines, two single-cylinder cars (198) and a larger one (199), all water-cooled. The large touring-car for the family is not included in these estimates. All cars are driven by gasoline and are equipped with extra large pneumatic tires. We have been driving machines for five years.

Previously we used horses. We always had four and sometimes six. Three buggies were required and $2,000 would probably cover investment in them. The three machines and their equipment may be conservatively estimated at $5,000. I have estimated the equine up-keep, including coachman, at $1,500, and that of the machines at $2,000.

In addition to the above expenses I estimate the depreciation of horse and buggy at 25 per cent. ($500), making total expenses $2,000, and that of the automobile 20 per cent. ($1,000), making that total $3,000. Very little of this expense or mileage is for pleasure. The income has at least increased sufficiently to care for the increased expense. Estimated in dollars and cents, I should say that there is greater expense, therefore greater risk, and no greater profits, and that therefore from a business standpoint machines may not pay. But their use adds so much to the doctor's efficiency, both with regard to better service to his patients and to time and opportunity to study and rest that machines more than pay. I should feel it almost retrogression if necessity required me to return to horses.

The choice of the car is one that requires much consideration. Such a choice demands adaptation to the requirements of the individual man. The cheapest car to maintain is undoubtedly the single-cylinder runabout. Our two of this variety (198) have been run for five years and are doing yeoman service over our very hilly country. They will go anywhere any other car will go, but not so comfortably or so swiftly as some. In our practice they have been maintained at about $20 per month each, exclusive of the chauffeur's wages and depreciation and a few extras. Such a car can be bought and thoroughly equipped for a little under $1,000 and weighs 1,600 pounds equipped. On the other hand, nothing has ever given me more physical comfort and satisfaction than my large water-cooled car (199) which weighs 2,450 pounds equipped. It has abundance of power and responds to the slightest touch of the throttle. Its up-keep, exclusive of depreciation and wages, is approximately $40 per month. Certainly, if one's practice will justify it, the latter is the greater satisfaction. On the other hand, in a level country with good roads the increased expense would be a good deal to pay for pleasure and satisfaction, because the increased efficiency alone would not justify the expenditure.

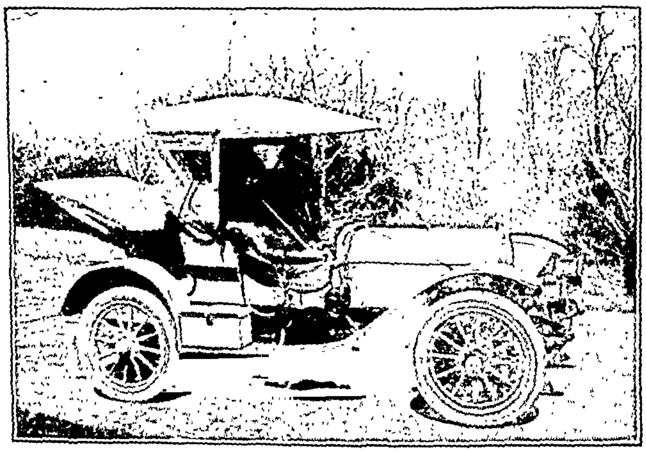

Fig. 32.—Automobile (199) described in accompanying article.

The greatest economy is effected by the use of large tires. I believe that each car should have one-third more tire capacity than the tire-makers require per wheel. One should always ascertain the weight of the car by running it on to good scales. Car manufacturers always underestimate weight. The large car (199), weighing 2,450 pounds, came equipped with 34 by 3½ tires. These are rated to carry 600 pounds per wheel, without load. Thus the four tires would be sufficient to carry 2,400 pounds. So equipped the tire was all shot to pieces in 1,500 miles. I changed my rims to carry 34 by 4½ tires. These are rated to carry 900 pounds per tire or 3,600 pounds. Since this change I have averaged much over 5,000 miles per tire, and had only five or six flat tires in that mileage; I can remember only four. The increased mileage and reduced expense was to be expected, but I was more pleased with the service than the economy. When one remembers that a car is practically as much out of commission while it has a flat tire as it is with a broken crank-shaft and that constant service is what the physician requires it is easy to understand the advantage of the large tires. The first cost of a 34 by 3½ tire is $48.00; the first cost of a 34 by 4½ tire is $74.59. These prices are taken from an old list but serve for comparative estimation. The first cost is less than double and the increased mileage is more than three times, while the difference in service is inestimable.

Another economy is a good chauffeur, whose employment leads to better service. If the doctor has the time he can soon learn all about the machine, and with a little attention each day can keep a cheap man on the job for rough work, but every machine must have careful and intelligent attention. Unintelligent meddling is worse than none. Better feed oil and gasoline and let her run than turn a hammer-mechanic loose on your car. I have known a man do more harm to a car with a hammer, a chisel and a large wrench in a few minutes than a month's usage would do.

It is better to carry as little extra weight as possible. For this reason the back seats of the larger car (199) are not made over-inviting and I do not carry a wind-shield. The latter is difficult to keep from rattling, and if one keeps down the noise of one's car one can the better detect loose connections, etc., before they have done any harm. It is necessary, however, to be protected from the weather. This large car has a top with a long low hood and a rubber apron which fits snugly around the steering wheel. In cold weather I have a large lap-robe over my knees. In the very bad weather and when driving very hard I wear goggles. These, the top, rubber apron, lap-robe and goggles furnish all the protection I have ever found necessary.

Large lamps are an economy because they keep one out of bad holes. I prefer to have them supplied from a tank rather than from a generator.

It has been my experience that the high-priced lubricating oils are not economical and that the cheaper gasoline, if well strained, answers admirably.

In addition to the usual tools I find that a good rope is most valuable to have in one's kit. This will either pull the other fellow or help one to be pulled. Also it may be tied around the tires and thus furnish traction when chains are not serviceable. It has helped me over very wet grass after a hard rain, out of muddy places and deep soft snow.

A good, intelligent horse is a most delightful companion and to me is preferable to a machine for pleasure; but time is the crying need and it is the time for which we Americans pay. The single-cylinder car is more time-saving than a horse and a four-cylinder car more efficient in this way than a single cylinder. One's need for a car depends on his need for time.

It is also true that the practice of a physician in general medicine is limited only by what he is able to do well during the busy season and an automobile well cared for reduces his limitations, thus allowing more work when practice is slack. If a physician could make arrangements to have the use of a machine during his busy season, and was willing to forego the pleasures of the machine in the summer, I am sure that the automobile would be a paying investment from the standpoint of the most exacting accountant. D.

Makes Your Hair Grow Long and Curly

The use of the car improves your health, steadies your nerves, expands your lungs, reddens the blood, increases appetite and makes life worth living. I haven't tried the aeroplane, but next to flying, autoing is the most exhilarating pleasure that I have known, and besides lightens the burdens of those dreadful night calls.

J. WILTON HOPE, Hampton, Va. (Auto 222).

AIRLESS AND CUSHION TIRES VS. SOLID AND PNEUMATIC

The tire undoubtedly gives the physician greater trouble, and is the source of greater expense, than any other part of his automobile, and anything, therefore, which promises to lessen those evils is always of interest, both to the automobile manufacturer and the user.

Until recently there were only two kinds of tires, namely, solid and pneumatic; hence when we speak of "tire troubles" our minds naturally revert to those two types.

Diagnosing the troubles accompanying the pneumatic tire we find the cause of the trouble to be compressed air and insufficiency of ordinary cotton fabric to withstand the enormous internal air-pressure and the terrible knocks and strains occasioned by contact with uneven road surfaces. It follows, therefore, that a stronger and more durable fabric than the highest grade sea-island cotton must be provided in order to retain the great air pressure, or compressed air must be done away with entirely. Up to date nothing has been produced that will do the work of sea-island cotton, and the best authorities believe that nothing can ever be produced that will even do the work as well.

Quickly detachable and demountable rims have facilitated the operation of removing and applying tires, but they have not removed the cause, and pneumatic "tire troubles" are as frequent and almost as annoying as ever.

Diagnosing the troubles accompanying the perfectly solid tire, we find that the trouble, for the most part, manifests itself elsewhere than in the tire, just as a severe headache may be the result of a defect in the eyes; and on account of the rigidity of the tire, the jar and vibration are so severe as to injure the machine; and repair bills and loss of time and use of the machine while in the repair shop, make the use of perfectly solid tires a source of greater trouble and expense than pneumatics. The solid tire wears satisfactorily and cannot puncture or "blow out" like the pneumatic, but it is too hard and rigid.

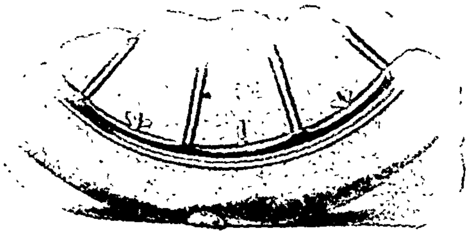
Fig. 33.—Pneumatic tire.

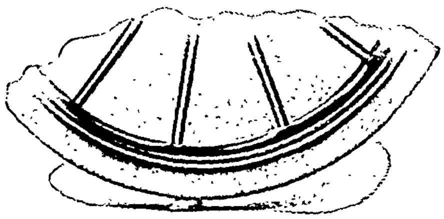
Fig. 34.—Solid tire.

A pneumatic tire absorbs obstructions by removal or displacement of the air at the point of contact between the tire and the obstruction and consequent absorption of the obstruction, and the tire passes over without a jar (Fig. 33). A solid tire rides up over the obstruction (Fig. 34); hence the jar or shock to the machine and occupant.

It follows, therefore, that the ideal tire must be one which will not depend on compressed air for its resiliency, but it must be softer and more elastic than the perfectly solid tire, while retaining its durability.

Taking up the problem, therefore, in a practical manner, we find that the resiliency must be at the point of contact between the tire and the ground so as to absorb the small obstructions that cause jar and vibration. This cannot be secured by springs in the spokes or cushion hubs, or the hundred and one other "patent medicines," but the absorbing medium must be right down at the ground, and if we are to do away with air, we must provide something else which can be displaced, and which is active, lively and resilient; there is only one known substance that can be utilized—rubber.

A fact of very great importance in this connection is that rubber is a non-compressible substance. Press a piece of rubber between your fingers, and it will "give" or compress only in proportion as it can expand elsewhere. You can displace rubber, but you cannot compress it, just as you can displace water by putting your finger into a glass filled with it, but you cannot compress it. If the piece of rubber were encased so that it could not expand, you could not compress it.

If, therefore, the rubber in a tire be so arranged as to permit it to "give" or "displace" all along the tread, when small road obstructions are encountered, you can produce the effect of a pneumatic tire when air is displaced. This is the result aimed at in the different types of "airless" and "cushion" tires, and the tire which is so constructed as best to produce this result is logically the best tire, for it will come nearest to producing the resiliency of the pneumatic, yet retaining the durability of the solid tire.

There are two types of these tires now on the market—one known as the "airless" tire, the other the "cushion" tire. The "airless" tire retains the shape of the pneumatic, and so far as external appearances go, cannot be distinguished from the standard pneumatic, and is designed to fit the standard clincher rims. This type of tire is composed of rubber and fabric and is molded in one operation; it is patterned after a cement bridge having a series of piers or columns of rubber, corresponding to the piers or columns of a bridge and a heavy tread of fabric and rubber corresponding to the road surface of the bridge. When the tire is completed it is just as homogeneous, or completely united, as the cement bridge, for the piers and tread are all molded and vulcanized together in one operation, and the piers will not separate from the tread any more than the columns or piers of the bridge will separate from the road surface. When the "airless" tire, therefore, strikes an obstruction the tire is pressed in at the point of contact, and the tread and pier bulge into the open spaces between the piers, and the obstruction is absorbed into the tire, hence the jar and vibration are practically eliminated. The fabric in its construction keeps the tire from stretching and becoming flabby and soft, and strengthens the piers or columns like guy wires. This type of tire can be retreaded.

The other type—the "cushion"—is made of rubber only, and contains no fabric in its makeup, and instead of having internal cells or open spaces, has a solid mass of rubber around the center of the wheel, but has open spaces on the outside designed to provide places for the rubber to "go" when an obstruction is encountered. This type of tire differs from the standard pneumatic in appearance and size, and cannot be retreaded.

John A. MacMillan, Dayton, Ohio.

NOT A MONEY-SAVER, BUT THE PLEASURE COMPENSATES FOR THE EXPENSE

I am one of the pioneer automobilists in the state. Since my first motor-car (202), I have had two runabouts (203, 204), and now have a little car (205) weighing 650 pounds. This is so new that I have not had time to try it out and therefore cannot speak either for or against it. My location is very mountainous, giving a car the hardest kind of a test. As a matter of economy, the automobile is not a money-saver, but the pleasure derived far more than overbalances this expense. The snow is deep here in the winter, at which time I use a horse almost exclusively. During the summer the horse is often not used for six weeks at a time. For different reasons I shall probably use the horse, on an average, twice a month. My choice is a light-weight, water-cooled car with pneumatic tires. The specifications of one which I have never used (206) come the nearest to being my ideal of a car of any in the market.

C. D. Voorhees, M.D., Sonestown, Pa.

A COMPILATION OF AUTOMOBILE STATISTICS

Some Deductions About Automobiles from the Statements of Many Physician Drivers

With the idea of securing some information in a statistical form concerning automobiles of various types, and physicians' experiences therewith, THE JOURNAL printed* a list of questions to be answered voluntarily by readers. In all nearly 500 replies have been received, indeed they are still arriving, but it was necessary to draw the line when some 434 had been received to allow time for compilation.

For whatever value may be derived from these statistics, thanks are due to the physicians who replied, and we wish hereby to express our appreciation for their cooperation. We have made arrangements to send a copy of the Automobile Key,† giving the names of the motor-cars referred to in this number, to each one who filled out a blank and also to each of the authors of articles—without any further effort on their part.

Of the 434 replies, 96 concerned horses alone; a few, steam and electric cars, as well as motorcycles, railway gasoline velocipedes, etc., and the remainder, 324, concerned gasoline automobiles. The conclusions drawn from the figures are of necessity very general and are to be accepted with some qualifications according to the circumstances, but they are nevertheless interesting and worthy of perusal.

GASOLINE AUTOMOBILES

It will be readily agreed that it is unfair to compare an $850 runabout with a $3,000 limousine or even with a $1,750 touring car. The 324 gasoline cars were divided, therefore, into three classes, cars costing less than $1,000, cars costing $1,000 and up almost to $2,000, and cars costing $2,000 and upward. For the purposes of this summary they will be called Classes 1, 2 and 3, in the order named. In Class 1 were 116 cars in Class 2 were 158 and in Class 3 were 50.

QUESTION 20: EFFECT ON INCOME

	Increased.	Decreased.	No Increase.	Not Answered.
Class one	69	1	35	11
Class two	82	1	56	19
Class three	27	0	19	4
Total	178	2	110	34

QUESTION 21: DOES IT PAY TO OWN A CAR?

	Yes.	No.
Class one	97	21
Class two	117	34
Class three	34	12
Total	248	67

The affirmative answer to this question as indicated by the figures is very emphatic. Of course, as might be expected, these answers involve a variety of considerations. Some have said "Yes" with the purely financial aspect of the question in mind, while others have thought, not only of the increased number of patients they can see, but of the time saved and relief from the tedium of getting around, with more leisure to themselves, or more time for study. Still others have thought most, perhaps, of the increased joy of living through the exhilaration afforded. These latter have recognized that there are other things in life besides the dollar and that the word "pay" does not relate exclusively to money.

QUESTION 22: STYLE AND PRICE OF CAR PREFERRED

	Price			Style	
	Low.	Medium.	High.	Runabout.	Touring.
Class one	35	60	2	92	13
Class two	20	111	6	97	23
Class three	3	25	9	22	10
Total	58	196	17	211	46

The above figures mean that of those who now use low-priced cars 35 still recommend cars of that class, while 60 recommend cars of medium price, and 2 those of high price. Of those now running a medium-priced car 111 still recommend that sort of car, while 20 recommend a low-priced car and 6 a car of high price. In class three only 9 recommend the high-priced car, which they are now using; 25 of these recommend the medium-priced car, but only 3 a low-priced car.

As will be seen, the medium-priced runabout is vastly in the lead, as was probably to be expected.

The following tables give averages which will explain themselves:

QUESTION 16: AVERAGE COST OF MACHINE

Class one	$ 747.65
Class two	1,192.18
Class three	2,564.74

QUESTION 18: AVERAGE COST OF MAINTENANCE AND DEPRECIATION PER YEAR

Class one	$282.95
Class two	492.00
Class three	716.37

QUESTION 3: AVERAGE ANNUAL INCOME

Class one	$3,720.20
Class two	5,028.84
Class three	8,322.00

QUESTION 7: AVERAGE MILEAGE FOR ONE YEAR

Class one	5,004
Class two	5,397
Class three	7,933

QUESTION 19: PERCENTAGE OF MILEAGE FOR PLEASURE

Class one	18 per cent.
Class two	17 per cent.
Class three	22 per cent.

QUESTION 8: AS TO EMPLOYING A CHAUFFEUR

	No.	Yes.
Class one	11	5
Class two	146	9
Class three	40	7
Total	297	21

This last tabulation simply shows how great is the majority of owners who run their own cars.

It will be seen that while there is considerable difference between the prices of cars of the low and high classes, the average mileage of each class does not show a great difference, the high-priced class, being used more for touring purposes,

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* The questions were as follows:

1. Your name and address? 2. Size of town? 3. Yearly income?
4. Are your roads good, fair or poor? 5. Hilly or level?
6. Radius of territory you cover?
7. What is your yearly mileage? 8. Do you employ a chauffeur?
9. Coachman? 10. Name of car? 11. Number of passengers?
12. Kind of tires? 13. Gasoline, steam or electric?
14. How long have you used autos?
15. For horses: what is your total investment including vehicle and harness?
16. For auto: what is your total investment including equipment?
17. What does your expense average per year, in using horses, including feed, care, repairs, depreciation, etc.?
18. What does your expense average per year, in using an automobile, including operation (gasoline or electricity), tires, care, repairs, depreciation, etc.?
19. What per cent. of your mileage is for pleasure?
20. What effect has the owning of a car had on your income?
21. Aside from the rest and pleasure, do you think that it pays you to own a car?
22. As a business proposition, would you recommend, for one in your position, a low, medium or high priced car—a runabout or a touring car? 23. Remarks.

† A copy of this key will be sent to anyone who sends a self-addressed stamped envelope.

FAVORABLE EXPERIENCE WITH A ONE-CYLINDER CAR

My car is a 1910 model, one-cylinder runabout (140), with non-pneumatic tires, and I am sure from my own experience that it will take one or two passengers anywhere that any car could take them regardless of size, price or power. The first car I owned was a 1907 stanhope (209), which gave me good service, but the inaccessibility of the motor, which was under the body, a wrong idea altogether, was a drawback in many ways too numerous to mention. The car I am using now has the motor easily accessible, which is a great consideration. A single cylinder means reduction in a number of parts, less expense and less trouble. It also means longer life. My old car is as good as ever so far as the motor is concerned and it has only one cylinder. The argument that some speak of in favor of a two or a four-cylinder engine, that should one go wrong the rest will bring you home, is absurd. What would you say to a man who would sell you a horse and tell you to take another horse along for fear one might die, then you would have a horse to get home with? My car makes no more noise than many of the two or four cylinders. I could break the speed law and get arrested any old time. What then is the use in keeping two or four horses to do your work if one horse will do it? Great motor power in a heavy car is like having money wasted in stock which does not pay your dividends. It is there but you do not get the use of it—that is, you can't realize any more on it than you would if you only had half or a fourth the amount of money invested. A heavy automobile has exactly the same effect. The fewer parts the less likelihood there is that something will go wrong. The springs on this car are easier than on any other car made because they are coil springs. I am sure on the points of first cost, which is $485, economy, reliability, accessibility, easy riding, and in every other way for a one or a two passenger car this car is away ahead of all the others. I am greatly pleased with the tires (210) which I wish more physicians knew about. There is no question but that they ride just as easy as do the pneumatic, at least they do on this car. The springs may have something to do with it, but I surely would not go back to pneumatics again. They are as resilient as a pneumatic tire and are neither solid nor pneu-, require no pumping and cannot puncture nor blow out, to a physician means something.

J. E. Asay, M.D., Rock Island, Ill.

A COMBINATION TRANSFORMABLE RIG

A few years ago I drove fine horses and loved them. When the auto epidemic raged in my neighborhood I fought it off until I was practically alone, I so loved my beautiful bays. When I finally decided to get an auto, contrary to my usual way of doing things, I selected the simplest and most inexpensive machine (215) built, possibly as an apology to my poor horses.

I have since learned that the only mistake I made was that I should have bought two. It was so simple my wife learned to run it. I have driven my machine thousands of miles since I have had it, all over the country, day and night, summer and winter, on all kinds of roads, and what do you think? No more horses for me; they eat too much, they go too slowly, they require too much care. My auto costs me less, is always outside the door waiting for me, and is as much a necessity as my telephone.

It is equipped with two sets of wheels, one with pneumatic tires and the other with solid tires, so I am ready for all seasons of the year and never have to bother with horses. It is a classy runabout one minute and converted into a four-passenger rig the next minute.

J. H. Veatch, M.D., Marine, Ill.

A Terse Comparison

Costs less than one horse and does more work than three, and is much easier on the doctor.

C. H. Miller, Chicago (Auto 230).

Air Versus Water

For this climate I can see no particular advantage in air cooling. The antifreezing solutions have given me satisfaction, and the water-cooled engines run more smoothly and require less adjustment.

C. S. Kalb, Spokane, Wash. (Auto 218).

The Simple Car

The more simple and less complicated a car, the better. A first-class, medium weight, medium priced car, given reasonable care, will not only stand a wonderful amount of hard work on all kinds of roads and in all kinds of weather, but a wonderful amount of abuse as well.

K. W. B., Nebraska (Auto 224).

Just Like Fishermen

The reason some auto owners have more expense than others is the overcharging, false representation and grafting of garage owners. There is not one automobile owner in a hundred who will state his true expense. It seems that a truthful automobile owner is a rarity.

W. A. Stoecks, Davenport, Iowa (Auto 223).

Get a Second-Hand Car to Start With

To the man in my position I would say, get a good second-hand car, as you must learn to run and care for it yourself, and you can get this knowledge most cheaply in this way. Don't expect too much at first. You will have to give a few public demonstrations on the main street, but if your religion will stand this you can be sure it is of the proper brand and you will soon learn to have things in order before starting. After a year's experience you will be in position to buy a new car and get unbounded satisfaction out of it.

C. H. Fox, Clarks, Neb. (Auto 225).

Does Driving a Car Become Automatic?

A point which seems not to have been raised in any of the answers received by The Journal is discussed *pro* and *con* by correspondents in the *British Medical Journal* of recent date. Dr. Allan Wilson writes that a motor car for a medical man "can scarcely be considered a boon or a blessing to his patients, because, when he is going from house to house on his daily rounds, his thoughts and attention, that should be occupied with the contemplation of the nature and treatment of the diseases which come under his notice, are, by necessity, directed to the steering of his car."

Dr. Thomas Fentem replies by saying: "My experience is that one arrives at the patient's bedside much more alert and less jaded after a long round than with horses; and, getting over the ground more quickly, one reaches home earlier than one could with horses. One therefore has more leisure to give to the consideration of the patients' cases in the quiet of one's study and among one's books, and that surely is better than trying to do this sitting beside a coachman; even if one's thoughts are stimulated by such accompaniments as blinding snowstorms, driving rain, gales of wind, and such like.

"The driving of a car becomes after a short time largely automatic, and this applies, perhaps, most of all to the steering, the task which Dr. Wilson appears to think requires such deep mental application as to banish all else from one's mind."

Dr. F. L. Nicholls writes: "One would almost feel inclined to think that Dr. Wilson had made one or two attempts to handle the ribbons or drive a motor and found it too much for his nerves; and if such is the case he is certainly a wise man to depend on his coachman to see him safely on his rounds, but I cannot allow the statement that a driver's whole attention must be given to steering to avoid accidents to pass without protest. If such was the case I pity the poor driver, for at the end of a week his nerves would be in such a state that he would be good for nothing but darning stockings or doing patchwork, even if he was lucky enough to keep out of an asylum.

"Dr. Wilson does not appear to know that all these actions to an experienced and skilled man are almost entirely automatic. The eye and hand do the work, leaving the brain free for the consideration of any matter its owner may desire. I do not speak without experience, for I have for over forty years had the handling of horses, including the breaking-in of young ones, and for over five years I have driven a motor, and I can assure Dr. Wilson that the only time when my brain is 'jumpy' is when I have relinquished the reins or wheel into some other person's hands. I am then anything but at ease; but directly I have again resumed my usual and proper place my brain is at ease and ready for the consideration of the most serious subjects connected with my practice."

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Original Articles

OCULAR PALSIES IN TABES*

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PHILADELPHIA

The importance of examining the eyes of tabetics has long been recognized by neurologists, for the ocular symptoms often precede all other sure signs. Indeed, so constant and characteristic are the pupillary, muscular and optic-nerve changes in this disease that, given in addition to even one of these, the history of previous syphilitic infection and another characteristic sign of tabes, such as loss of knee-jerks, diminution in muscle tonus of the legs, or a marked disturbance of the bladder or sexual functions, the diagnosis of tabes becomes very probable. It is not the purpose of this paper, however, to treat of the ocular symptomatology of tabes in general, but to dwell particularly on the palsies of eye muscles, and especially of the extra-ocular muscles, which are observed so frequently at some stage or other of the disease.

In attempting a generalization of the extra-ocular palsies, it may be remarked that, while they resemble in many particulars palsies of eye muscles due to other causes, they manifest certain characteristics, which, while not in themselves peculiar to tabes, are at least highly suggestive of the presence of that disease.

The first and chief of these is their transient tendency, for it is an almost constant experience that the palsies which appear in the early stages of the disease vanish after periods of persistency ranging from but a few hours to two or three weeks, and, moreover, while it is true that the palsies which occur in the later stages are as a rule permanent, even these may be transient and may totally disappear, usually after a longer period, however, than when they are observed at the commencement of the disease.

The careful historian will often elicit the occurrence of diplopia in very many cases from patients who are loath to believe that the attacks of double vision from which they suffered even months or years before other symptoms of tabes developed had any connection with their general nervous disorder.

As illustrative of a fleeting palsy occurring in the early stages may be cited the case of a man, aged 45, who consulted me in 1895 on account of a paralysis of the right external rectus muscle. He confessed to having had an initial sore when 25 years old, but as he had received prompt and, as he thought, efficacious antisyphilitic treatment and as his health had been uninterruptedly good, he considered himself to be well. In addition to the extra-ocular palsy noted at the examination, Argyll-Robertson pupils were present, and his physician reported other signs of early tabes. Potassium iodid was administered in ascending doses, and the diplopia totally disappeared after two months' duration. Although this case has passed from my observation, it was reported to me five years ago that the patient was still living, and, though manifestly the subject of tabes, he seemed to suffer but little inconvenience from it.

Another patient, M. J., aged 53, a patient in the Philadelphia General Hospital, gave a history of having had diplopia six years before admission and that it lasted two years. When the diplopia disappeared he began to notice occasional jerkings in the right foot and his gait became disturbed. Examination which I made six months ago revealed no ocular palsies, and the neurologic report was as follows:

"Slight ataxia in upper extremities. Romberg symptom. Ataxic gait. Hypotonia in lower extremities. Knee-jerks lost, etc." Syphilis was denied.

As an example of a transient palsy occurring in a late stage of the disease may be mentioned the following:

J. C., admitted to nervous wards of the Philadelphia General Hospital in 1896, aged 51, with the history of an initial luetic lesion twenty years previously. It was elicited on admission that the earliest symptoms of tabes had manifested themselves six years previous to admission as "cutting" pains in feet and legs. Girdle pains were also present. Two years later gastric and bladder symptoms supervened. Argyll-Robertson pupils were present in both eyes, knee-jerks were lost, ataxia was noted in the upper and lower limbs, but the extra-ocular movements were uninvolved. Six years after admission diplopia appeared (due probably to a paretic condition of the right superior rectus) and persisted for several months. The double vision then gradually disappeared and did not return during the two years or more during which the patient still continued to retain sight, vision being gradually lost at the end of that period from optic atrophy. When I examined the patient six months ago the movements of both eyes were found to be markedly incoordinated, not only from the incoordination of blindness, but also from a paretic condition of the extra-ocular muscles, which seemed to reside chiefly in a weakness of the right superior rectus muscle.

Thomas, who analyzed 111 cases of tabes from the Hopkins clinics in 1899, found the initial symptoms to consist of diplopia in 6 instances, and of other eye symptoms in 14 instances. Diminution of vision was the initial symptom in 4 cases. Double vision and dimness of vision were associated once and double vision with other symptoms 7 times. Ptosis was the first symptom associated with pain twice. Of all the symptoms, pain was the one most generally complained of, being present in 57 cases; ataxia was the initial symptom 24 times, numbness of extremities 6 times, paralysis of bladder 5 times, gastric crises 4 times, paralytic attacks twice, while loss of sexual power, mental symptoms and neurasthenia were recorded as initial symptoms in one instance.

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* Read before the Buffalo Ophthalmological Society, Dec. 11, 1909.

Thomas did not mention in how many of his cases the diplopia disappeared, but I think that it has been my experience that the palsies vanish, for a time at least, in perhaps 90 per cent. of the cases which I have had under observation. This percentage is based on an analysis of the histories of 60 cases of tabes taken from my own private and hospital records and from the study of 28 cases of advanced tabes which I recently made in the wards of the Philadelphia General Hospital, through the courtesy of Drs. C. W. Burr and William G. Spiller, neurologists to the institution.

In addition to the transient tendency which tabetic ocular palsies exhibit must be noted a very marked disposition to recurrence, either the same muscle being repeatedly palsied, or the palsy appearing in another muscle or muscles, shortly after it has disappeared in one governed by another nerve. An interesting case of this nature is reported by Pel, in which oculomotor palsy, which was the first indication of the disease, recurred 7 times, after having completely disappeared 6 times. This disposition to recurrence is well exemplified by a case under observation at the present time, in which the diplopia, which previously appeared eight years ago, disappeared after about two months' persistency, to reappear three years later for a period of three months, two years later for three months, while the present attack came on one month ago and is still persistent. The muscle occasioning the diplopia at present is the left inferior oblique; in the other attacks the patient states that one object was always higher than the other and there was some lateral displacement, but he was unaware of the precise muscle or muscles which the oculists to whom he went for relief found implicated. This [illegible]t, a man, 49 years old, contracted syphilis when [illegible]9; he now shows evidence of beginning atrophy of [illegible] optic nerves, with other well-developed signs of [illegible]bes. Argyll-Robertson pupils are present in both eyes.

So fleeting is the palsy in some instances that it may pass away in a few hours, while in others it may persist for years, the muscle regaining its power only after long loss of function. This return of the muscle to its normal action after even years of paralysis should be recognized by ophthalmic surgeons and should tend to discountenance operations on the eye muscles of tabetics.

As illustrative of this type may be cited the case of R. L., a woman, aged 60, who consulted me at the Howard Hospital in 1896 on account of double vision, which examination showed to be due to a paralysis of the left external rectus muscle. There was a history of recurrent attacks of double vision of a somewhat similar nature having occurred for some years previously, but these attacks had been fleeting, whereas the double vision for which she then sought relief had persisted for six weeks or more. The knee-jerks were absent, Argyll-Robertson pupils were present in both eyes and the discs were partially atrophic, the fields being contracted. There was a probable history of syphilitic infection some fifteen years previously. Potassium iodid was administered for three months in high doses without affecting the palsy. The patient then passed from observation for two years, when she returned for a change of glasses. Examination at this visit showed all the extra-ocular muscles to be functioning, the patient asserting that she had not been troubled with the double vision for some two or three months previously. In this case the palsy completely disappeared after a persistence of about two years. Recent efforts to find the patient, with a view to determining the progress of her disease, have been ineffectual.

Another peculiarity of tabetic palsies is that they are usually dissociated, i. e., paralysis of the levator or rectus internus alone, the palsy following no particular rule. This is especially true when the palsy appears as an initial symptom, when it rarely affects all muscles or muscle groups supplied by a single nerve.

In studying the relative frequency with which the several eye muscles become affected in tabes, Uhthoff found the oculomotor involved in 54 per cent. of his cases, the abducens in 33 per cent., the trochlearis in 8 per cent. Ophthalmoplegia externa existed in 5 per cent. and isolated ophthalmoplegia interna in 5 per cent. Beyer's, Stock's, Erb's, Fournier's and Charcot findings were similar. Of 100 cases of tabes seen in Schoeler's eye clinic, the oculomotor was involved in 26 instances. From an analysis of 60 of the cases which I observed and which lent themselves to such a study, it was found that the oculomotor was at fault in 30 of the cases, the abducens in 6, and the trochlearis in 2. In the remaining 22 cases the paralysis was of a mixed type. Complete unilateral oculomotor palsy occurred in 3 instances. Complete palsy of the oculomotor in all its branches is very rare, Uhthoff meeting it in but 5 per cent. of all his cases, and in but a very small proportion of these was the palsy binocular.

An interesting case of complete palsy of the right third and sixth nerves and of a partial implication of the left third nerve was one of the cases placed at my disposal by Drs. Burr and Spiller and studied by me. This patient, a man, aged 39, had noted that five years previous to his admission to the hospital in 1907 the left pupil did not contract and that he had some difficulty with vision. About the same time a numbness was remarked in the right foot and two years later in the left leg. Girdle pains followed later. Examination which I made six months ago showed the conditions just mentioned. Argyll-Robertson pupils and Romberg sign were present, and ataxic gait, with absent knee-jerks, was noted, with some impairment of sensation in lower extremities.

According to Oppenheim, associated palsies never occur in tabes, but Uhthoff, though stating that the finding must be very rare, cites a case reported by Chvostek with bulbar symptoms, in which there was left-sided ptosis, palsy of the left rectus internus and of the right rectus internus in association with paretic nystagmus.

I found paralysis of both external rectus muscles in two cases. One of the patients, G. H., a man, aged 41, was admitted to the nervous wards of the Philadelphia Hospital Oct. 3, 1907, with well-marked optic atrophy. A period of double vision had preceded the blindness, however, by some five years. The sexual power was lost at the same time that the blindness developed, ataxia in the lower extremities manifesting itself somewhat later. My examination six months ago revealed complete atrophy of both optic nerves with paralysis of both external rectus muscles; knee-jerks lost; ataxia in both upper and lower extremities.

Wilbrand and Saenger observed that isolated palsy was an accompaniment of the initial stages, and generally disappeared, persisting as a permanent finding but very rarely, i. e., in but 3.3 per cent. of 302 cases. Marina, however, found the paralysis to be persistent in 10.6 per cent. of the 150 cases observed by him.

Although the palsies may occur at any stage of the disease, most authors have observed them relatively early, 83 per cent. of Berger's cases and 80 per cent. of Gowers' occurring in the initial stage. Uhthoff's experience was similar, and he considered the palsies to be analogous to the appearance of the Argyll-Robertson pupil and optic atrophy.

After studying an enormous number of cases of tabes, taken from all sources, Uhthoff found that palsy of the eye muscles occurred in from 20 to 22 per cent. of the cases. Moeli placed the figures at 22 per cent., Reumont at 17 per cent., Marina at 19.5 per cent., Leinbach at 16 per cent., Tumpouski at 21.7 per cent. Mann found palsies in 30 per cent. of his cases. It should be noted, however, that the percentage of palsies observed in an eye clinic is necessarily higher than that observed in a clinic devoted to nervous cases, since the moment double vision is complained of the patient seeks the former. In the rare cases of true tabes in children, Uhthoff found ocular palsies in about 14 per cent. of the cases, while Argyll-Robertson pupil occurred in 65 per cent. and optic atrophy in 45 per cent.

According to the figures just quoted, palsy of the eye muscles in tabes in adults is much more common than atrophy of the optic nerve, which, from Uhthoff's figures, is seen in from 18 to 20 per cent. of all cases. They are not observed, however, in the initial stages of tabes as frequently as the Argyll-Robertson pupil or as lancinating pains, or again as the loss of reflexes, as will appear from the table prepared by Fehre and quoted by Uhthoff in his remarkably learned dissertation on this subject in the second edition of the Graefe-Saemisch "Handbuch":

	Per Cent.
1. Disturbances in sensibility (in the widest sense)	92
2. Lancinating pains	85
3. Loss in patellar reflex	83
4. Argyll-Robertson pupils	79
5. Romberg phenomenon	71
6. Ataxia	55
7. Bladder and rectal symptoms	50
8. Gastric crises	43
9. Pupillary inequality	41.5
10. Paresthesias	36
11. Headache and attacks of dizziness	40
12. Involvement of cerebral nerves	40
13. Girdle sensations	36
14. Weakness in legs	30
15. Palsy of ocular muscles	30
16. Optic atrophy	21.5
17. Cardiac neuroses	21.5
18. Psychic disturbances	21
19. Diplopia	19
20. Laryngeal crises	15

Rarely muscles other than the ocular muscles may be palsied at the same time. Thus a case reported by Turner, that of a man of 40, there was some ptosis and also some bilateral palsy of the soft palate and paralysis of the vocal cords. Rarely also, instead of an ocular palsy, a blepharospasm may be noted or a blepharospasm may precede the development of ocular palsies.[1]

Of 1,088 cases of tabes seen by Grosz, Berger, Bernhardt, Leinbach and Bonar, 222, or 20.4 per cent. had optic atrophy. As this number is so large, this percentage probably represents the true frequency of this symptom in tabes.

It is of interest to remark that, from an analytical study of 127 cases, in which optic atrophy occurred 55 times, Mann found no tendency for the involvement of the nerve to lighten the future course of the disease. It must be remembered, however, that the form of tabes which begins with optic atrophy is often for a long time combined with a loss in power of the roots of the thoracic nerves, when all other symptoms are absent. According to Mann, the same holds good not only for optic atrophy, but is also the rule in cases presenting Argyll-Robertson pupils and ocular palsies, both of these symptoms being sometimes associated for a long time solely with anesthesia of the trunk.[2]

Abducens palsy occurred in 13 per cent. of Uhthoff's cases, though binocularly in but 2 per cent. This observation is of considerable moment in establishing a differential diagnosis between tabes and cerebral syphilis, multiple neuritis, intoxications, etc., in which latter conditions binocular isolated disease of the abducens is not unusual. Authorities agree that in tabes abducens palsy is, as a rule, incomplete and but rarely permanent.

Uhthoff's statistics show isolated ptosis in about 4 per cent. of his cases; indeed, so much stress does this observer lay on this symptom that he believes, in common with Wilbrand and Saenger, that a unilateral or bilateral transient ptosis, complicated by one or more pronounced tabetic symptoms, such as Argyll-Robertson pupil, lancinating pains, failure of knee-jerks, optic atrophy, etc., makes the diagnosis of tabes extremely likely. Wilbrand and Saenger and Kahler found the combination of ptosis with abducens palsy not infrequent in the early stages of tabes, while Uhthoff's cases, on the other hand, showed a frequent combination of palsy of the levator with that of the superior rectus.

It has long been a mooted question just what influence syphilis, the underlying factor in so many cases of tabes, might have on the occurrence of the palsies. Berger, for example, found, in 56 cases of tabes studied by him which had ocular palsies, that a direct syphilitic history was obtainable in 25, a specific infection being denied in 31. He asserted also that his observations led him to infer that the palsies in the syphilitic cases showed a greater tendency to be permanent than in the nonsyphilitic ones, the syphilitic palsies persisting on an average of six and one-half months, the non-syphilitic but two months. His figures showed also that the former class of palsies exhibited a greater tendency to be multiple than the latter. Uhthoff's figures, on the other hand, do not substantiate Berger's, and this careful observer has not been able to satisfy himself that palsies occurred more frequently in cases of tabes with a syphilitic history than in those where no syphilitic history was obtainable. Uhthoff concedes, however, that a subject with syphilis affected with ophthalmoplegia is oftener later affected by tabes than those with ophthalmoplegia without previous syphilitic infection. Spiller believes that these statistics may be unreliable, for, he says, "many persons deny syphilitic infection with full knowledge of the infection." He thinks statistics based on the Wassermann reaction will be more valuable. At present this reaction seems to be obtained in about 60 per cent. of all cases of tabes.

As a further point in the differential diagnosis between the ocular symptoms of tabes and cerebrospinal syphilis may be cited the observation of Groenouw, that the Argyll-Robertson pupil is generally indicative of tabes, unilateral ophthalmoplegia interna of syphilis. Again, according to Fournier, syphilitic palsies as a rule affect the entire nerve or a great number of its branches, while a single muscle is involved in tabes. It has been my experience that inequalities in the size of the pupil and disturbances in its reaction are found in the early stages of cerebral syphilis, often associated with optic neuritis, while palsies of the extra-ocular muscles, as a rule, belong to the later stages. When syphilitic palsies do occur in the early stages they develop more gradually and persist longer, tabetic palsies, as has been said, manifesting a tendency toward speedy disappearance and frequent recurrence. Conjugate deviations and ophthalmoplegia externa are caused almost exclusively by syphilis.

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[1] Posey and Spiller: The Eye and Nervous System, p. 502.

[2] After a critical reading of this paper, Dr. W. G. Spiller has told me, "It is very important to separate those cases of tabes in which optic atrophy is an early sign from those in which it occurs late. It is only in the former that the atrophy seems to have any influence on the course of the disease, and while it does not invariably modify the course, it does so in a sufficient number of cases to show it has a decided influence. Indeed Déjerine has employed the term of 'tabes arrested by blindness.' Statistics which include the cases of early and late optic atrophy are valueless for this purpose. Early optic atrophy is not very rare, tabes without implication of roots below the thoracic is distinctly rare, and early optic atrophy is frequently seen with the usual lumbo-sacral type of the disease. Byron Bramwell questions the influence of optic atrophy at any stage on the course of the disease."

Ophthalmoplegia interna is rarer in tabes than in other affections of the nervous system. Mann, for example, finding it but 19 times among 127 cases of tabes (14.9 per cent.). Of 30 cases of ophthalmoplegia interna seen by Uhthoff, syphilis was the causal factor in 23.3 per cent., tabes in 10 per cent., progressive paralysis in 6.6 per cent., trauma in 6.6 per cent., extreme cold in 3.3 per cent., intracranial disease in 6.6 per cent., while no etiologic factor could be found in 40 per cent. of the cases. Uhthoff found ophthalmoplegia interna with unaffected external eye muscles oftener in tabes than with palsied extra-ocular muscles. Wilbrand and Saenger's observations tallied with his, but 14 per cent. of the more than 100 cases of tabes and ophthalmoplegia cited by them exhibiting ophthalmoplegia interna in association with palsy of the extra-ocular muscles. In the remaining cases, Argyll-Robertson pupils were observed relatively often, normal pupils but rarely. In view of this fact, Uhthoff has suggested that a non-tabetic ophthalmoplegia can readily be differentiated [illegible] one due to tabes by the presence of an unaffected [illegible] It must be remembered, however, as Gowers has pointed out, that a true syphilitic ocular palsy may coexist with locomotor ataxia; indeed, tabes often cannot be distinguished clinically from syphilis of the nervous system.

According to Gowers, the initial symptom of tabes rarely appears within the first three years after the chancre; indeed, in one of his cases it was not noted until forty years afterward. Spiller thinks that usually about nine years elapse after the initial lesion before syphilitic palsies of the eye muscles appear.

It may not be amiss in this connection to refer briefly to the recent paper by Putnam,[3] in which exception was taken to the almost universally accepted opinion that syphilis was the sole cause of tabes, and stress laid on the necessity of considering other factors in the etiology. In the discussion which followed the reading of this paper, Allen Starr stated that he was utterly unable to find any syphilitic taint in 20 per cent. of his private cases of tabes, and it was elicited that Gowers had positively stated that syphilis could be excluded in 10 per cent. of all cases of tabes.

There is good evidence that tabes is not always directly the result of syphilitic virus, but results from parasyphilis from some toxic substance produced within the body. Indeed, according to Fournier, the comparative mildness of the primary constitutional symptoms in most syphilitics who ultimately become tabetic almost seems to indicate that when the syphilitic virus expends itself in severe primary and secondary manifestations there is less tendency to the subtle poison, which proves so disastrous to the nervous system.

The pathogenesis of ocular palsies in tabes is still in doubt, but the views of most neurologists, however, are probably best expressed by Fraenkel, who states that they are either pathologic occurrences of another nature than the general disease they are implanted on, or they are a part of the general disease. If they belong under the first category they share with the general disease the common etiology only, i. e., the syphilitic infection, and are pathologically primary or secondary nerve inflammations in distinction from the pathologic lesion of the general disease—a primary degeneration of the sensory neuron. The first type is oftener seen in those cases that are rather forms of multiple cerebrospinal syphilis of the tabetic type, and the second in the class of cases that incline toward the picture of a genuine tabes. In the first instance they may, therefore, be looked on as syphilitic ocular palsies occurring in a case of multiple cerebrospinal syphilis of the tabetic type, and in the second instance they are essentially the same phenomena as the motor phenomena in the extremities of tabetics.

It is for the second type that the view of a primary sensory origin seems to Fraenkel to be justified.

In their earlier stages, Fraenkel believes the palsies to be simply due to the loss of tonus which is mediated through disease of the sensory neuron, while later on when, owing to the long duration or the severity of the process in the sensory neuron, the motor neuron has undergone secondary changes, the palsies are more lasting, more extensive, and their immediate cause found to consist anatomically in degeneration of the nucleus, nerve trunk or muscle. Fraenkel is of the opinion that this view is not only quite compatible with the clinical and anatomic characteristics of the type of palsies outlined above, but receives further support from the fact that it permits a uniform pathogenetic conception of the general disease.

According to Uhthoff, an ependymitis in the third and fourth ventricles, as well as in the aqueduct of Sylvius, although found but relatively seldom post mortem, is to be regarded as the pathologic entity in cases of tabes which exhibit ocular palsies, while the transient nature of the palsies is accounted for by Kahler and Dufour by changes in the circulation with ependymitis and vascular dilatation. Strümpell, on the other hand, attributes the transient character of the palsy to peripheral changes in the nerves of the ocular muscles, ascribing the permanent palsies to lesions in the nuclei and roots of the nerves. Finally, there are others, like Basso, Rieger, Forster and Berger, who ascribe the fleeting character of the palsies to sympathetic vasomotor influences.

In concluding this paper, which has dealt with the true muscle palsies of tabes, I would also call attention to certain weaknesses or pareses which may be frequently demonstrated in individuals with cerebrospinal sclerosis. Often these may be diagnosed by the employment of the Maddox rod; more usually, however, they can be made manifest with the ordinary test for diplopia at the end of the excursions of the different muscles. Such pareses must be differentiated from static muscular insufficiencies, and account taken of their shifting and transient tendency in efforts toward their correction, by the incorporation of prisms in the lenses correcting any refraction errors.

I desire to express my appreciation of the honor which the ophthalmologists of Buffalo and its vicinity have done me in requesting me to appear before them, and to thank them for their courteous attention during the reading of my paper. And while perhaps nothing has been said but that is familiar to all, nevertheless I trust that the citation of the statistics of the large European clinics as well as my own experience, insignificant as it may be in comparison with the monumental work of Uhthoff and others, may, nevertheless, stimulate a more general interest in the prompt recognition of a disease whose successful treatment often rests on its early diagnosis.

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[3] Putnam, James Jackson: A Side Light on the Origin of Tabes, Drawn from a Comparison of Tabes with Spinal Degeneration as Seen in Certain Anemias and Kindred Disorders of Nutrition, The Journal A. M. A., Sept. 25, 1909, liii, 996.

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THE RELATION OF THE UNIVERSITY TO THE MEDICAL SCHOOL *

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The American people are universally distinguished for their business ability and business successes. We live, however, in a world of universal compensations and retributions. If we have an enormous business talent which has won for us a name in the field of trade and commerce, we tend to draw into this province all our other interests. The pulpit and the press are not infrequently denounced as organs of syndicated wealth. In this very city of Chicago, the colleges and universities of the country have recently been declared worthless by a multimillionaire citizen because their graduates have not been trained in the ways of money making. And if in this presence I do not say that the medical profession has been commercialized I do not hesitate to assert that many medical schools and colleges have been established for the pecuniary benefit of their promoters, with the result that we now have in the United States almost as many of these institutions as all the rest of the civilized world, and our standards of medical education are a disgrace to the nation and an outrage on humanity.

The personal profit of individuals has been the most powerful and prolific motive for the multiplication of medical colleges, as it has also been the most pernicious. Fortunately, however, the general spirit of the age, as well as higher ideals of professional education, are working against these commercial medical schools. Not only are the motives of their founders and supporters better understood, but the superiority of medical schools founded on a different basis throws them more and more in the shade, while the growing costliness of a sound education in modern medicine makes their puny efforts ridiculous. At the same time there has been a growing appreciation of the fact that every professional school to be vital and efficient must be a department of a university. Under the influence of these ideas and agencies I have no doubt that the number of private-enterprise medical colleges is destined rapidly to disappear in this country. And I need scarcely say to this audience that this process is already hopefully under way.

I turn to a second motive for the establishment of medical colleges which deserves more consideration than it has hitherto received. I am, indeed, firmly persuaded that no medical school of the highest class can be maintained apart from a university. But I am equally persuaded that no university, merely because it is a university, is justified in founding a medical college. There has been a general impression not only in university circles, but among the members of the medical profession, that a university needed a medical department to round out its organization, and, as it were, to complete its existence. This belief is without warrant in history. It is true that the oldest university in the world, the University of Salerno, had a medical school, and was, indeed, nothing but a medical school. But within a generation came the universities of Bologna and of Paris, the one famous for law and the other for theology, and neither of them in the days of their first glory possessed a medical department. In his great history of universities Rashdall shows that some of the most famous of these institutions had only one or two departments, and that no particular faculty, medicine or any other, can be regarded as essential to the idea of the university, as that institution developed among the nations of Europe. The word university has nothing to do with universal knowledge. It means, on the contrary, merely a guild or corporation. When the founder of Cornell University declared that he would found an institution where any person might find instruction in any study, he formulated a brand-new idea of a university. Yet even at Cornell that idea remains at best an ideal, so vast is the sum total of human knowledge, so varied the fields of investigation, and so costly the maintenance both of instruction and research. And without special endowments, and large endowments too, neither Cornell nor any other university would be justified in the establishment of a medical department. The appeal that such a department is necessary to make a complete university is, as I have shown, historically without justification. And in any event to establish a university department in medicine which you have no special funds to maintain is to be a party to fraud on the public. This is especially true at the present time when, owing to the advance of science and the indispensableness of making provision for it in the curriculum, medical education is the costliest education given at our universities. I recall with satisfaction that on different occasions before the establishment of our own medical college at Cornell University, when I was solicited to "adopt" this or that medical college as the medical department of Cornell, I always replied that I did not want a medical department unless it were as organic a part of the university as any other college; nor would I favor the establishment of one without adequate special endowments for its maintenance. I may add that the members of the medical profession with whom I dealt were invariably amazed at the position I took, and in some cases felt it an affront to themselves that I was so mercenary and autocratic as to decline the offer they made me of eminent men unless the university had the right to control them and endowments to support their work! These recollections are from twelve to eighteen years old. And when I say that the position which I took in those years is now the position of the leaders of the medical profession, I may be pardoned for finding in that circumstance a striking evidence of the great advance which has been made in so short a time on the subject of medical education.

I have spoken of the costliness of medical education. In no other field has science brought such a wealth of new and fruitful discovery. All scientific work is expensive, and the medical sciences the most expensive of all because they deal with the complex phenomena of human life. All education in engineering science is also expensive. But engineering rests in a last analysis on the sciences which deal with energy and motion. And these

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practice of medicine or surgery. Now we have reached a point in the higher education of this country in which it is recognized that the proper time to begin professional work or to specialize with reference to that professional work is at the end of the sophomore year in college. I have no time here to argue this position. But I may say that it is a conclusion which has been reached both by the National Association of State Universities and by the Association of American Universities; the former organization embracing all the state universities of the country, and the latter a score or so of our foremost universities, both state and endowed. Perhaps the position of the Association of American Universities would be more accurately described if I stated that its desideratum is a minimum of two years of college work as a basis for professional work, and that some of the institutions embraced in that association would prescribe even a longer time. The important point is that both these organizations, which include all the leading universities of the country, demand that at least two years shall be spent on liberal education before undertaking professional education or specializing with a view to it. I am myself in hearty accord with this program. I should like to see our schools of medicine, law, and engineering reorganized with reference to it. And I am glad to say that a movement of that kind is now in full force in our schools of law, and especially in our schools of medicine. While Johns Hopkins in 1893, Harvard in 1900, and Cornell in 1908, demanded a degree in arts or science of students in medicine, a score or more of medical schools now require two years of college work, and about the same number now require, or are soon to require, one year of college work which shall include the courses in physics, chemistry and biology.

So far as this latter group is concerned, the requirement of a year of college work is probably due to the necessity of providing satisfactory instruction in physics, chemistry and biology. But as this departure breaks with the traditional high-school requirement for admission to the medical course, it prevents the high schools from continuing to be feeders of the medical colleges, and yet it does not establish a preliminary education sufficiently high to command the confidence and the patronage of college men. The chances are, therefore, that this arrangement will prove only a provisional one, and the institutions which have adopted it will either rescind their action and re-establish their connections with the high schools or prescribe a preliminary education of two years in arts and sciences, with a view to attracting the patronage of college undergraduates. It has not, I think, been sufficiently considered that when a medical college once severs its educational connections with the high schools it may so far as the effects on attendance are concerned almost as well prescribe two years of college work as one, and pretty nearly as safely three years as two.

Another service which the universities should render to the medical college is the determination of the question, What subjects of study should enter into the education of prospective physicians and surgeons? Assuming, that is to say, that candidates for the medical degree will have at least two years of study in a college of arts and sciences, the question is, What subjects shall they study? The criterion in answering this question should undoubtedly be the requirements of a liberal education. And it frequently happens that in the case of a professional subject like medicine the requirements of a liberal education in arts and sciences coincide to some extent with the scientific conditions which the medical profession would like to see fulfilled before students enter the medical college. I believe that a perfectly satisfactory adjustment of the problem can be worked out along these lines. I am well aware that this has not been the prevalent point of view. On the contrary, we have had two extreme positions more or less contradictory, which seemed to exclude a middle ground on which educators and medical men might alike agree. These two conflicting views have been voiced by the advocates of liberal education on the one side and of professional education on the other. The former have been in the habit of insisting that an A.B. degree should be a condition of admission to a medical college without much regard to the subjects embraced in the A.B. curriculum, provided only that a liberal education might be claimed on the basis of that A.B. degree. I believe that the underlying desideratum of these advocates was a classical education.

Opposed to them stood the other party made up mostly of medical men who insisted that an A.B. course in itself was of very little value as a preparation for medical studies. What they desired was a preliminary education in the pure sciences: physics, chemistry, biology, comparative anatomy, etc., on which the medical sciences were based. Between these two schools there has in the past been little agreement. But I believe that the time has come for a satisfactory adjustment of the problem.

I have already stated that the foremost educators today agree in demanding that the first two years of the college course shall be required of students who intend to enter such professional schools as law and medicine. These educators, furthermore, have in the course of the last two years come to a pretty close agreement as to the content of the curriculum of these two years of college study. They are agreed that it should embrace English, history, economics, one or two foreign languages, and mathematics, and one or more of the following sciences: physics, chemistry, biology, geology or botany. Such a curriculum furnishes the prospective medical student not only with subjects which are requisite to a liberal education, but also with subjects which form the best preparation for the subsequent study of medicine. Do you ask me what studies I would prescribe for this prospective medical student? I answer at once the English language and literature, French and German, history, economics, advanced algebra and trigonometry, and chemistry, physics, and biology. To these I would add a subject which I never see mentioned by advocates of either of the extreme positions I have already described. I mean the important subject of the study of the mind, and more particularly those aspects of it which are embraced in the modern science of experimental psychology. Considering the close relation between mind and body and the dependence of some diseases on mental conditions, I am often amazed that medical men fail so completely to realize the importance of the study of the sciences of mind as a part of that curriculum of the preliminary education they lay down for prospective students of medicine. I believe that in the first two years of a college course there is time to include psychology with the other studies in liberal arts and sciences which I have already specified. And I do not hesitate to assert that a young man who has received a thorough training in these subjects may, on the one hand, be regarded as a liberally educated man, and, on the other, as scientifically qualified for admission to a medical college and the successful study of the sciences prescribed in the first year of the medical curriculum.

The last service I shall mention which a university could and should perform for a medical college is to provide it with capable and devoted teachers and investigators imbued with the spirit of research. I do not think that the medical profession, and I am sure that the general public does not realize the nature of the change which the advances in modern science make necessary in the faculties of our medical schools. In the commercial and private-enterprise medical colleges, a number of practicing physicians and surgeons came together and devoted the fag end of their time to the instruction of students in medicine. Not only were these men not scientifically prepared for the task they assumed, but their interests lay in the practice of their profession, and the one object they had in view in establishing a medical school was to enlarge their medical practice and make it more lucrative. Now the authorities of our universities know that we cannot have efficient teachers and fruitful investigators, first, unless they are thoroughly trained for their work, and, secondly, unless they devote thei ime and energy to that work. The staffs of lleges are sadly in need of reorganization nce of this criterion. If our medical col- nk *with other colleges in the university,* e because the teachers and investigators on s aff bring undivided hearts to their work and render the same whole-souled service. It is practically impossible for a man to have a large and successful practice and to be *at the same time a scientific and efficient* teacher and investigator in medicine. I lay it down, therefore, as a first condition for the elevation of our lleges, that their chairs shall be filled by nvestigators of the highest scientific stand- e their entire time and energy to the work and investigation. There is no difficulty ing this criterion to the professorships represented by the first two years of the medical curriculum—to subjects like anatomy, physiology, biochemistry, pathology, bacteriology, etc. I recognize, however, that there is a difficulty when we come to the professional and practical branches embraced in the last two years of the curriculum—medicine, surgery and obstetrics, not to speak of the minor specialties. Yet I am confident that it is impossible, under the present system of appointing to these subjects distinguished practitioners who continue in unrestricted practice, to produce satisfactory results in the work of instr vice I investigation in these fields. I recogr that was inclined to that men are no' ation by establishing a medical obstetrics, childre be the single word: *don't.* Institu- unless they ion is as unhallowed a motive for the multiplication of medical colleges as the love of personal gain. The latter motive has filled the country with commercial schools of medicine. These schools are a disgrace to our country. Starving medical departments of impoverished universities are equally disgraceful. And the supposed glory accruing to a university which institutes professional schools when it has no funds to maintain them is as dishonorable a motive as the gain in professional advancement sought by physicians and surgeons who establish and maintain the private-enterprise medical institution.

The first service, therefore, which universities may *render to medical* education is a negative one. But, though negative, it is fundamental and vital. Have done with sham in medical education! Recognize that a medical department is the costliest depart of a university! There may be a first-class univ th- content with their evenings or even with their afternoons. Teaching and investigation demand not only their best powers, but their best powers when they are fresh and capable of their highest exercise. Keeping this consideration in mind, I would suggest that their forenoons might be devoted to the work of the medical college. And if the rest of the day were devoted not to general practice, but to consulting practice, or to practice in a hospital owned or controlled by the medical college, we should have the best solution of the problem I can think of at the present time.

I have been speaking of the services which a university can and should render a medical college. I have spoken also of the unsatisfactory condition in which much of our medical education is at the present time. But I cannot conclude without calling attention to the enormous progress which has been made in the last few years, and I want finally to express my own belief and conviction that there is no subject embraced in the purview of our universities in which such rapid progress in recent years has been made, both in instruction and investigation, as in medicine, and there is no subject in which I look toward the future with more hopefulness and confidence of results, great, fruitful, and beneficial to mankind.

THE ADMISSION RATE FOR TUBERCULOSIS AMONG MERCHANT SEAMEN DURING THE PAST TWENTY YEARS

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The figures presented herewith will, I think, be a surprise to many people, even to some of the medical officers of the Public Health and Marine-Hospital Service who have been active in bringing about the result which *the figures indicate. A few words of explanation are* necessary before the figures themselves are presented.

In 1893 Passed Assistant Surgeon J. O. Cobb of the service contributed to the annual report of Surgeon-General Wyman a strong plea for the establishment of special hospitals for the care of tuberculous seamen. The following year Passed Assistant Surgeon Bratton submitted a very strong plea for the same action. Surgeon-General Wyman took up the plan at once and quickly secured the use of the abandoned military reser- gation at Fort Stanton, New Mexico. The original plan gener. Cobb was to have two sanatoriums, one on the At- trainin in North Carolina mountains, and one in Califor- leges and' funds, together with the theory, much equipped to supply a dozen years ago than now, that thorough training idy did better in the arid Southwest physiology, physiologi the opening of one general sana- ogy, and bacteriolog on.

be added a readin reason for the establishment of the which is an al the fact that under conditions as they man, it will patients who got well enough to demand good train rges went at once aboard ship, *to spread the* certain a among their shipmates and again to break I hav emselves under the strain of their occupation medic e stress of their unfavorable environment. The alone ases remained in hospital and were comparatively mer nless, except in the smaller hospitals where they ar not b ut in wards by themselves.

ll this was that the patients who should chance for recovery not only lost it, neans of actively producing other cases. Moreover, the patients were averse to entering hospitals, and as long as they could get about preferred to come at long intervals to our out-patient dispensaries, as the figures to be here presented clearly show.

It was believed that by sending the favorable cases to Fort Stanton they could not only have a better chance for recovery, but, what was much more important, they would lessen the active foci of infection among their fellows. At first only selected cases were to be sent, but this was rather vague, as individual medical officers naturally differed a good deal both as to their prognostic skill and as to the appeal of the purely humanitarian side of the matter. The proportion of those sent to Fort Stanton has steadily risen, however, reaching 56.4 per cent. in 1908.

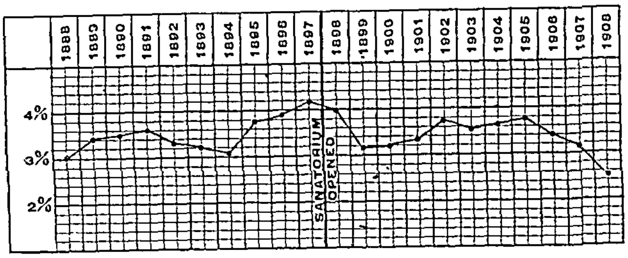
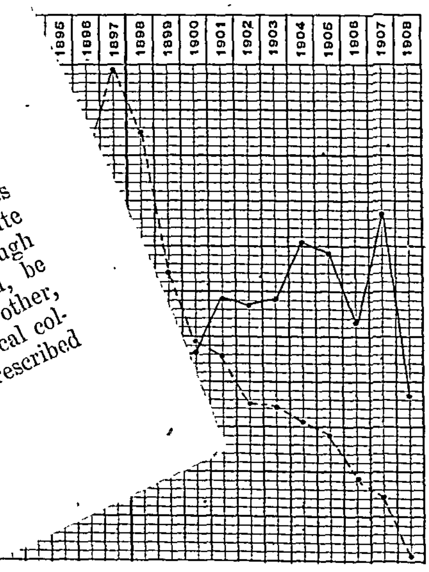


Chart 1.—Percentage of admissions for tuberculosis 1889 to 1908. Total admissions to hospital for all causes were 270,210. The average annual total was 12,867.

The sanatorium was opened in 1897, but only in a small way at first, so that the close of the fiscal year 1908 practically marked the end of the first decade of its existence. I have, therefore, taken the figures for the past twenty rs, ten before the policy of segregation was begu n since.

D time there were 270,210 patients marine hospitals for all causes; the annual admissions ranging, in round numbers, from eleven to fifteen thousand. These figures are large enough to amount to something, and their value is enhanced by the three factors which give peculiar value to all the admission statistics of the marine hospitals, viz.: The beneficiaries of the service are practically all adult males, from 21 to 50 years of age; the diagnoses are all made in strict accordance with an official nomenclature, and the figures are recorded and tabulated in all the hospitals in accordance with a uniform system.



.elation between numbers of out-patients (dotted line) .spital admissions (solid line). The heavy vertical line in .ter indicates the date of beginning the policy of segregation.

To make the figures truly contrasting I have omitted the figures from the insular stations not existing prior to 1898. The following table shows the percentages of admissions for tuberculosis during the twenty years, and Chart 1 shows the same thing graphically:

TABLE 1

Year.	Percentage of Admissions for Tuberculosis.	Year.	Percentage of Admissions for Tuberculosis.
1889	3.42	1899	3.18
1890	3.47	1900	3.15
1891	3.67	1901	3.30
1892	3.33	1902	3.66
1893	3.20	1903	3.57
1894	3.08	1904	3.64
1895	3.79	1905	3.78
1896	3.90	1906	3.40
1897	4.19	1907	3.15
1898	3.98	1908	2.53

At first glance one would say that the figures represented an almost complete failure to secure the result aimed at. The rate for 1908 is only 1.19 per cent. less than that of 1889, while it is only 1.64 per cent. less than the rate of 1897, the year the sanatorium was opened. The real result is seen, however, when we compare these figures with those of the out-patient records.

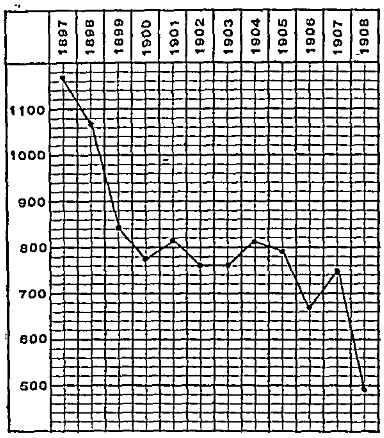


Chart 3.—Total admissions for tuberculosis (out-patients and hospital patients) since policy of segregation was initiated.

I therefore present Table 2, which shows the totals of out-patients treated for each of the twenty years, the admissions to hospital for the same years and the total in each case:

TABLE 2

Year.	Out Patients.	Hospital Patients.	Total.
1889	543	437	980
1890	605	474	1079
1891	547	529	1076
1892	526	500	1026
1893	376	443	819
1894	465	395	860
1895	654	457	1111
1896	592	469	1061
1897	696	475	1171
1898	625	439	1064
1899	470	376	846
1900	395	383	778
1901	376	441	817
1902	329	438	767
1903	321	441	762
1904	304	502	806
1905	293	496	789
1906	247	418	665
1907	222	533	755
1908	157	342	499

This shows that the total admissions in 1908 are only 46.7 per cent. of what they were the year before the segregation was begun. Now, of course, it would be absurd to claim that the present policy alone has resulted in more than cutting the rate in two. The fact is, course, that there was formerly much duplication, both by admission of patients to hospital who had previously been treated as out-patients and the readmission of hospital cases, and by out-cases being treated at different places. To what extent these readmissions would reduce the totals shown ten years ago it is impossible to say, but the figure was very considerable.

On the other hand, there is not the slightest doubt that admissions for all causes are now examined much more critically for signs of tuberculosis than was done fifteen years ago. I know that at the Marine Hospital in Chicago a very respectable per cent. of men recommended for transfer to Stanton have been ones seeking admission for various causes, medical and surgical, and found to have incipient tuberculosis. There can be no doubt that we are now diagnosing much more nearly all the tuberculosis presenting itself than we formerly did.

This increased accuracy of diagnosis compensates for a good many of the readmissions under the old order of things, but, assuming that there remain 20 per cent. of the readmissions to account for, a very liberal estimate, we would still have the astonishing and gratifying result that we have reduced the amount of tuberculosis among the beneficiaries of the service at the present time by more than 25 per cent. as compared to what it was when the policy of segregation was begun. Unquestionably this has been due to having eliminated very largely the chance of the active, walking cases infecting their mates board ship. If we could send all the out-patients to ospital, even if we only transferred to Stanton the 56 per cent. sent last year, we could doubtless in five years make a more striking reduction, but for several reasons this is difficult to do. That it can be closely approximated, however, if care is taken to fully explain the matter to the men themselves, is shown by the experience in Chicago, where we have had only three out-patients treated for tuberculosis in the past two years.

The change brought about in the relation between out-patient numbers and the number of hospital admissions, as well as the total cases, is strikingly shown in Chart 2.

Chart 3 shows the result of combining the total figures, and it shows, I think, that the Public Health and Marine-Hospital Service has a right to claim a very notable accomplishment in the direction of securing a decrease of tuberculosis among the merchant seamen.

THE EARLY DIAGNOSIS OF RENAL TUBERCULOSIS *

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No more striking instance of concerted action against disease by the combined efforts of the profession and the laity has ever been seen in this country than the war that is at present being waged against tuberculosis. The line of battle is being directed against the pulmonary form of the disease because this is its stronghold and the focus from which other organs become secondarily infected.

In the second annual report of the Phipps Institute of Philadelphia, an institution established for the prevention, treatment and cure of tuberculosis, may be found a resumé of the autopsy findings in sixty cases of advanced pulmonary tuberculosis, of which number thirty-five showed unmistakable evidences of renal involvement. It is hardly necessary, however, to repair to the tabulations of our large hospitals for a knowledge of the frequency of the disease in individual organs, because tuberculosis is always with us and there is no community that does not witness it in many of its varied forms.

The curability of phthisis in a majority of the early cases receiving proper attention is a well-established fact. With the advent of more positive means of diagnosis, the recognition of the incipient stage of tuberculosis in the kidney has become an added responsibility on the profession.

Albarran has well said: "The early diagnosis in renal tuberculosis is the key to success in its treatment." There are certain somewhat vague signs occurring early which it is essential to observe in order to bring these patients under proper environment in time for favorable results in their management. Especially is this true for practitioners removed from laboratories and unacquainted with the more precise methods of those more favorably situated for the study of the disease.

The disease at its beginning is characterized by an absence of symptoms on the part of the kidney, but in a majority of instances manifests its presence by vesical irritation. Because of these facts the earlier writers drew the erroneous conclusion that the bladder was primarily the seat of infection. More recent investigation, aided by the ureteral catheter, has proven its hematogenous origin.

The cases of patients presenting themselves to the physician because of frequent, painful or burning micturition without definite origin should at once excite suspicion, no matter how short the duration of the attack, and should call for a very thorough physical examination of the entire body, and especially of the lungs, the testicles, the epididymis, the seminal vesicles and the prostate. When early symptoms exist in the kidney region they are of little value, as slight pain and enlargement may mean only hypertrophy of the sound side. If the patient is a female a vaginal examination should be made in the attempt to find a thickened ureter. Fenwick of London attributes great diagnostic significance to this sign if combined with a displaced and retracted ureteral orifice, as seen through the cystoscope.

Much may be gained of diagnostic value from the cystoscope in the hands of those skilled in its use, and the localization of the disease is only possible by ureteral catheterization. Under the most favorable circumstances these procedures are difficult and many times rendered impossible by disease processes. At the onset of the irritation the bladder mucosa is much congested, the vessels cannot be outlined, bleeding is easily caused and flakes of pus that cannot be washed away cling to the walls. Ulceration supervenes, and if the condition is unilateral ulcers may be found, either single or multiple, about the ureteral orifice of the infected side. The mucosa, having lost its original color, becomes a dull gray and thickened to such an extent that the ureteral orifices become buried. If unchecked the inflammation extends to the musculature of the bladder, causing thickening of the walls, trabeculation, sacculation and sufficient contraction to render its capacity too small for sufficient media to allow investigation. The very early cases may show marked pathologic changes in the bladder mucosa, hindering many times the rapid catheterization which is essential if we are to guard against carrying the infection to fresh soil. If the catheterization cannot be accomplished easily and with the least possible manipulation of the cystoscope, it should be deferred until such time as the bladder may have been rendered sufficiently clean by daily irrigations.

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* Read before the Northern Tri-State Medical Association (Michigan, Ohio and Indiana), at Fort Wayne, Ind., Jan. 11, 1910.

When the bladder involvement is more or less superficial it shows a strong tendency to heal without further aid than the removal of the kidney focus. The more persistent conditions call for heroic treatment, as they are many times the cause of more anxiety to both patient and physician than the original focus of the disease. After having discontinued the use of carbolic acid because of the pain incident to its application, I have resumed its employment with modifications. Instead of using 50 c.c. of the aqueous solution of carbolic acid, as advised by Rovsing, I find that the pain and collapse will not be encountered if smaller amounts are at first used, allowed to remain in the bladder but a few seconds, and the excess that may have clung to the walls washed out with a 30 per cent. alcohol solution. In this way a tolerance will be secured and the full amount may be employed later.

The positive diagnosis of renal tuberculosis is dependent on competent bacteriologic and chemical examination, and necessitates laboratory facilities and a knowledge of cystoscopic technic. In the most expert hands tubercle bacilli can be demonstrated in 75 to 80 per cent. of the cases. The sample of urine sent to a laboratory should not be less than three ounces. It should be drawn through a sterile catheter into a sterile bottle after having carefully cleaned the external parts. After several failures to find the organisms by the staining methods in vogue, resort must be had to the inoculation of guinea-pigs. While bacteriuria without a kidney lesion is not common, it is a possibility, rendering the demonstration of the bacilli in the absence of pus of little diagnostic significance. Tuberculin may be employed as a diagnostic aid, but as a matter of fact it has little value when compared with the laboratory methods. During the delays incident to the laboratory investigation and the return of reports, the bladder should receive daily irrigations to aid in the removal of inflammatory products constantly being poured into it from above, thus aiding materially in the localization of what might become an interstitial inflammation in the mucous membrane of the bladder.

With few exceptions it may be stated that a unilateral renal tuberculosis with the opposite kidney showing sufficient function calls for nephrectomy, but many of the patients entering the hospital are far removed from the early stages of the malady, and nephrotomy, or the opening of a perinephritic abscess, is many times a measure which must be resorted to for the saving of life. Many times these are examples of our sins of omission and a strong plea for the early recognition of the disease and the removal of morbid processes.

However, I cannot agree with the more or less widespread opinion that in the early stages and under the conditions above cited the kidney must inevitably be removed. Post-mortem examinations many times disclose healed tubercles of the kidney as well as of other organs. Complete cures are at times shown in cases where the existence of the disease was easily demonstrable. I have recently had the opportunity to follow a case that very aptly illustrates my point.

History.—A female patient, 22 years of age, consulted me in July, 1909, for frequent and burning micturition. She was very emphatic in her statement that it had been of only two weeks' duration, and that she had never experienced the trouble before the present attack. A bacteriologic examination of the urine from the bladder contained tubercle bacilli, and the subsequent samples obtained by ureteral catheterization revealed a right unilateral infection with the opposite kidney normal. The sediment of the urine from the right side also contained pus-cells, but no other organisms. Because of the short duration of her trouble, coupled with the fact that the patient had financial support sufficient to procure for her the most favorable environment, I did not advise operative procedure, but sent her to a cool climate for the summer, where she lived out of doors both night and day. She also had a sufficient and well regulated diet and received daily bladder washings, with the injection of a 2 per cent. solution of iodoform in sweet oil twice a week. She returned to me in October having gained twenty-one pounds in weight, her cystitis was cured and her urine showed an absence of both bacteria and the products of inflammation.

While I am well aware that the kidney in her case may harbor a latent infectious process, I think no one could at the present time advise its removal, more especially as the patient is a member of a family of more than average intelligence and has been advised of the possibility of a recurrence and the consequent necessity of surgical measures. Such methods are only applicable in selected cases, in which the most favorable conditions are obtainable; nor should the expectant treatment be persisted in if beneficial results are not immediate. As the means for earlier diagnosis in renal tuberculosis become more common there will be more cures without operation reported, and more rapid results will be obtained by local application of remedies to the kidney pelvis.

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A STUDY OF THE EYE IN MENTAL DEFECTIVES *

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It is difficult to understand why the fundus examination in idiocy has been so little emphasized. Probably the examination of the fundus in such cases, being so extremely difficult, may account in part for the lack. Possibly the negative findings of Moss[1] have also deterred some from the study. He examined 116 feeble-minded children in Berlin. The study showed but 2 cases with alteration in the fundus. His cases, however, were not drawn from the low-grade idiots.

The much more careful work of Gelfe[2] on 578 cases throws more light on our subject. His cases comprised (1) 192 mentally backward boys and 192 girls of the same class; (2) 25 boys and 21 girls who were weak-minded (feeble-minded of our designation) and 47 boys and 30 girls who were unteachable imbeciles (imbeciles of our classification), and, finally, 42 boys and 28 girls of the low-grade idiots. All the cases were examined in the institute for mental defectives at Berlin. But 27.5 per cent. of all Gelfe's cases showed normal eyes. These results are quite in accord with our findings. Gelfe's idiots showed a percentage of 43 for normal idiot fundi as compared with 56 for weak-minded and 83 for simply backward children.

Many writers concern themselves with functional imperfections only in examining for visual defects in the mentally deficient child, which accounts for the apparent discrepancy of data. It may be said in passing that there seems to be unanimity of opinion that eye defects are much more frequent in mentally defective children, and that these defects react in further crippling the child's mental development.

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* Read before the Pediatric Section of the New York Academy of Medicine, April, 1909.

[1] Legrange and Valude: L'Encyclopedie française d'opthalmologie, 1905, iv, 34.

[2] Gelfe, T.: Relationship between Visual Organ and Feeblemindedness (Karlsruhe), Samml. a. d. Gebiete d. Augenh. Hälle a. S., 1904.

Our study of the eye in the mentally defective child was undertaken with a twofold purpose:

1. From studies made in 1907 by Clark and Tyson[3] into the nature of the eye changes found in dementia præcox it was shown that a fairly constant eye syndrome was present in that mental disorder, embracing, among other signs, a mild grade of optic nerve degeneration, which was thought to be of autotoxic origin. In the numerous discussions of the paper held before various societies on the occurrence of the optic nerve changes in dementia præcox, it was thought that the syndrome was due more to a strong tendency to neural degeneration in the precocious dements than to a particular autotoxin, and that careful examinations into the allied states of mental degeneracy so ideally presented by such conditions as imbecility or idiocy ought to throw light on this phase of the subject. And, indeed, it has. Fully three-fourths of all cases of idiocy of our present study show varying degrees of a retrobulbar neuritis of a degenerative character.

2. The second object of inquiry was to note the presence or absence of pathognomonic structural defects in the eyes of feeble-minded and idiots comparable with the other grosser mental and physical defects so well known. The negative findings on this second part of our study have been disappointing. It would seem that the eye defects in idiocy do not usually extend beyond those of mere functional incompetence of vision. Moreover, the defective central innervation may explain the lack of visual acuteness, in defect of attention, as well as defect in perception of color, etc.

Our study was made in our Randall's Island service, which gives a range of more than 1,000 cases to select from. Although 150 cases were selected, but 129 patients could be examined carefully. Fifty cases, each, of feeble-mindedness, imbecility and idiocy were chosen. The patients of the feeble-minded class were of the highest teachable grade. Those of the imbecile class were of the non-teachable grade, but able to care for themselves and do simple tasks about the wards, while those of the idiot class were the lowest types of helpless cases in the entire service. Only idiopathic cases were studied.

Changes in external examination of the eyes were found in but few patients; unilateral ptosis was noticed in two feeble-minded children and in one idiot. Strabismus was found in one feeble-minded child. The pupillary reflexes to light, accommodation, etc., were present in all, but sluggish in the idiots. There was rigidity of the pupils in one idiot. The acuity of vision, the fields of vision and the refractive errors could not be determined, owing to lack of accurate cooperation because of mental defect. By means of retinoscopy there were found 4 cases of myopia of high degree, 3 of hypermetropia and 15 of astigmatism of various types.

The ophthalmoscopic examination was made by Dr. Cohen by means of the indirect method, with a candle as the source of light; complete mydriasis was obtained by the use of atropin sulphate solution. In only 106 of the 129 could the fundi be properly examined.

Feeble-Minded.—But 9 of the 29 examined showed normal fundal appearances. Pallor of the temporal half and edema of the nasal half of the disc were present in seven cases. Two patients showed slight indistinctness of the disc and one well-marked neuritis. Evidence of an early stage of atrophy (as shown by pallor of disc) was found in 6 cases. In none was there advanced atrophy present. Dilatation of veins was seen in four patients.

Imbeciles.—Of the 24 examined there were 15 in whom the eyegrounds were normal in appearance. Only 4 patients of this group showed pallor of the temporal half and edema of the nasal half of the disc. Slight indistinctness of the disc was present in one patient. Pallor of the disc was seen in these cases. One patient showed well-marked atrophy.

Idiots.—Normal fundal appearance was present in but 2 of the 53 cases of this group. Temporal pallor and nasal edema were seen in 13 cases. One showed general congestion of the entire disc, 8 presented a generalized pallor of the discs. Optic atrophy was present in 3 cases; the veins were dilated in one. One patient, each, showed choked disc, thrombosis of the central vein, retinal congestion, retinal hemorrhage.

No specific cause can fully account for the degenerative changes which we have noted in the optic discs of idiots. It is not necessary or desirable to review in detail the considerable literature of pathogenesis of idiocy. It is doubtless likewise unnecessary to say that, after all possible causes of idiocy have been considered, a very large number of idiots remain unaccounted for. We are content at this time to call attention to the fact that in the majority of the cases idiocy is attended by fairly constant and definite changes in the optic nerve.

In conclusion, it may be said that our study shows there is probably a well-marked tendency to neural as well as psychic degeneration in the great majority of all grades of idiots. The research is submitted as a contribution to the clinico-pathologic study of idiocy and degeneration.

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[3] Tyson, H. H., and Clark, L. Pierce: The Eye Syndrome of Dementia Præcox, The Journal A. M. A., May 2, 1908, l, 1415.

CONGENITAL SACROCOCCYGEAL CYST OF EPENDYMAL ORIGIN

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Although it is the primary purpose of this paper to report a case of congenital cystic tumor occurring in the sacrococcygeal region, a few words regarding the general subject of tumors situated in this locality will help to make clear the pathogenesis of this case. Therefore, after considering the general classification of sacrococcygeal tumors and reviewing the cystic type in some detail, the embryology of the caudal end of the human embryo will be considered before taking up my case.

The congenital dorsal-sacral hernia containing bowel and bladder must be considered in connection with tumors of this region. Lotzbeck[1] gathered from the literature 6 such cases, which he divided into simple and combined cases. Under the heading of simple he cites three cases: two were hernias of a part of the bowel with a normal sacrum, reported by Bezold[2] and Schreger,[3] respectively, and one case of hernia of a part of the bladder with a normal sacrum, reported also by Schreger. Under the heading of combined cases he cites also 3 cases: one a dorsal hernia combined with a cyst, in which case the sacrum was normal, reported by Meinel,[4] and 2 cases with defective sacrum; one reported by Schmidt[5] in connection with a cystic tumor and absence of the sacrum, and another reported by Stafford[6] in combination with a spina bifida.

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[1] Lotzbeck, C.: Die angeborenen Geschwülste der hinteren Kreutzbeingegend, Munich, 1858.

[2] Bezold, von: Sammlung seltener chirurgischen Beobachtungen und Erfahrungen, Arnstadt, 1812.

[3] Schreger: Chirurgische Versuche, ii, 164, etc.

Analogous to the bony defects and accompanying complications found in the cervical, dorsal, and especially in the lumbar region, we note that spina bifida, both anterior and posterior, and spina bifida occulta, with meningocele and myelomeningocele, are likewise to be reckoned with in the classification of tumors of the sacrococcygeal region. Nieberding,[7] in an excellent article, has collected 9 cases with anterior sacral meningocele. Lotzbeck also reports 9 cases of congenital hydrorachis in the sacral region, 3 of which were without spina bifida and 6 with spina bifida. These have been confused with another group of tumors, the genesis of which is yet but little understood, although histologically they are readily classified as cystic lymphangiomas, angiosarcomas or peritheliomas (coccygeal gland?) and simple lipomas. A combination of the former (meningocele, etc.) with the latter (lymphangiomas, lipomas, etc.) is also found and deserves special classification according to von Bergmann.

Aside from these hernias and spinal defects and neoplasms, such as lipomas and lymphangiomas which have no character peculiar to this region, the congenital pathologic productions of the sacrococcygeal region may be classified according to the more modern authors (Herrmann and Tourneux,[8] Tillmanns,[9] E. von Bergmann,[10] Stolper,[11] Marchand,[12] Borst,[13] Calbet[14]) into four principal groups: the caudal appendages, the dermoid cysts (pilonidal cysts and sinuses), mixed tumors and fetal inclusions.

I. CAUDAL APPENDAGES

The caudal appendages are of two types: the pseudo and true tail formations. The pseudo-tails are devoid of vertebræ and are due to the abnormal persistence and hypertrophy of the caudal filament (Herrmann and Tourneux[8]), or they may be formed in some cases by lipomas which have simulated the shape of a caudal appendage. The true tail formations (Förster[15]) consist of new growth of bone and cartilage or are prolongations of the sacrum.

II. DERMOID CYSTS

The sinuses and simple dermoid cysts, or pilonidal cysts, so called from the fact that frequently they contain nests of hair, occurring in the median body line, between the buttocks at lower end of sacrum and coccyx, though congenital, are often first noted during early adult life after irritation or inflammation has called attention to this region. Various theories have been advanced to explain their genesis. Hodges explained them as congenital dimples, being filled in by hair rubbed off from the body; the dimple being due to imperfect union of the lateral halves of the body. Féré thought them due to incomplete closure of "posterior umbilicus," meaning the lower end of the medullary canal. Lannelongue assumes that there is an extension inward of the skin which is bound down to the coccyx. Mallory,[16] to study this condition, made microtome sections through the sacrum and coccyx of embryos at various ages. He says:

> These cases show that in fetuses of three to six months there is very frequently present over the coccyx, a canal lined with epithelium, in some cases connected with the skin, in others not; in some situated near the skin, in others near the coccyx. It seems much more likely that they are due to incomplete obliteration of a former canal, and extending as they all do upward and posteriorly to the coccyx, the medullary canal seems the most likely origin.

Tourneux and Herrmann[17] had earlier noted these epithelial rests of the medullary canal (*vestiges médullaires coccygiens*) which contracted adhesions to the deep layers of the skin, but explain the dimple or *fossette coccygienne* as due to the traction, during downward growth of coccygeal end of vertebral column, by the caudal ligament, which is a bundle of fibers connecting the *vestiges coccygiens* to the extremity of the coccyx. The anatomic facts which Tourneux and Herrmann presented in 1887 in support of this mechanical explanation have been confirmed by Ernst Unger and Theodor Brugsch.[18] Further reference will be made to this subject in the discussion of the embryology.

III. MIXED SACROCOCCYGEAL TUMORS

The mixed tumors (cystosarcomas, etc.) of the sacrococcygeal region present a very complex structure and have been found in the following formations (Herrmann and Tourneux, Lotzbeck, Borst and others); cysts of more or less voluminous size, the simple or stratified epithelial lining of which is essentially polymorphous and may or may not have cilia; epithelial masses of glandular aspect; cartilaginous or bony masses; smooth and striated muscle fibers; masses of nervous substance; the whole distributed without any apparent order in a framework of connective tissue.

These tumors, according to Borst,[19] Herrmann and Tourneux,[8] von Bergmann,[20] Braune,[21] Lotzbeck,[1] result from the abnormal hyperplasia of a group of organs, belonging to the subjects which carry them. They are monogerminal—that is, they have arisen from a single impregnated ovum and the cysts and neoplastic masses result from developmental errors, excessive hyperplasia of one or more elements, ectopia of contiguous tissues and similar errors in development. It appears very probable that the various transitory organs are able to give birth, each to that which concerns it, to the neoplasms, the origin of which will be indicated by the analogy of their histologic composition. These transitory structures are: (a) the caudal medullary tube (*les*

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[4] Meinel: Prag. Vrtljschr. f. pract. Heilk., 1849, iii, 116.

[5] Schmidt: Jour. d. pract. Arznk. u. Wundarznk. (Hufeland's), iv, 147.

[6] Stafford: A Treatise on the Injuries, the Diseases and the Distortions of the Spine, London, 1882, p. 48.

[7] Nieberding: München. med. Wchnschr., 1904, li, 1384.

[8] Herrmann, G., and Tourneux, F.: Sur l'origine des Tumeurs congénitales de la région sacro-coccygienne, Jour. de l'anat. et physiol., Paris, 1905, xli, 113.

[9] Tillmanns: Zur Enstehung der angeborenen Sakraltumoren, etc., Deutsch. med. Wchnschr., 1904, xxx, 629.

[10] Bergmann, E. von: Berl. klin. Wchnschr., 1884, No. 48.

[11] Stolper: Die angeborenen Geschwülste der Kreuzsteissbeingegend, Deutsch. Ztschr. f. Chir., 1899, L, 207.

[12] Marchand: Sacraltumoren, Eulenberg's Real-Encyclopedie, 1899.

[13] Borst, M.: Die angeborenen Geschwülste der Sakralregion, Centralbl. f. allg. Path. und path. Anat., 1898, ix, 449.

[14] Calbet: Contribution à l'étude des tumeurs congénitales d'origine parasitaire de la région sacrococcygienne, Thèse de Paris, 1893.

[15] Förster: Handbuch der allgemeine pathologische Anatomie, 1855.

[16] Mallory: Sacrococcygeal Dimples, Sinuses and Cysts, Am. Jour. Med. Sc., 1892, New Series, ciii, 263.

[17] Tourneux, F., and Herrmann, G.: Sur la persistance de vestiges médullairies coccygiens pendant toute la période foetale chez l'homme, etc. Jour. de l'anat., 1887, xxiii, 498.

[18] Unger, E., and Brugsch, T.: *Zur Kenntniss der Fovea und Fistula sacrococcygea, S. caudalis, etc.*, Arch. f. mikr. Anat., 1903, lxi.

[19] Borst: Ein Sacraltumor von hirnartigen Bau, Beitr. z. path. Anat., 1902.

[20] Bergmann, E. von: Zur Diagnose der angeborenen Sacralgeschwülste, Berl. klin. Wchnschr., 1884, No. 48.

[21] Braune: *Die Doppelmissbildungen* und angeborenen Geschwülste der Steissbeingegend, Leipsic, 1862.

life the medullary tube is prolonged to the end of the vertebral column, and at the last vertebra it is curved backward and becomes adherent to the deep layers of the skin. And at the end of the third month by the more rapid growth of the vertebral column than that of the soft parts, the portion of the medullary tube adjoining the vertebræ is dragged down with it and as the reflected portion remains attached to the external integument a curve is described by the neural axis, the branch of which that is in relation to the dorsal surface of the coccygeal vertebræ is termed the direct coccygeal segment (*segment coccygien direct*) and the portion directed upward and backward is termed the reflected coccygeal segment (*segment coccygien réfléchi*). In the fourth month the direct coccygeal segment atrophies and disappears, but the dorsal or reflected segment continues its evolution, and it is to the cellular masses constituting this segment that the authors apply the term *vestiges coccygiens* of the medullary tube. These medullary coccygeal vestiges attain their maximal development during the fifth month, when they are composed of masses of small spherical or polyhedral cells having an irregular cavity lined by a layer of prismatic polyhedral or pavement cells. These are attached to the extremity of the coccyx by bundles of laminated fibers, the caudal ligament. From the sixth month of fetal life the *vestiges coccygiens* undergo progressive atrophy. Nevertheless, rests or remnants of them may be found at the time of birth. In the growth of the soft parts which force the cutaneous coverings backward, the skin situated in relation to the "coccygeal vestiges" remains fixed at the point of the coccyx by the caudal ligament. In certain cases this ligament does not yield to the extension of the neighboring parts and the skin invaginates and constitutes an infundibular depression more or less deep (*fossette coccygienne*). The wall of this depression is lined by the cutaneous covering, devoid of hair follicles, but containing sudoriferous glands in abundance. It is thus that cysts of the second type or dermoid cysts (pilonidal cysts) are formed in the sacrococcygeal region.

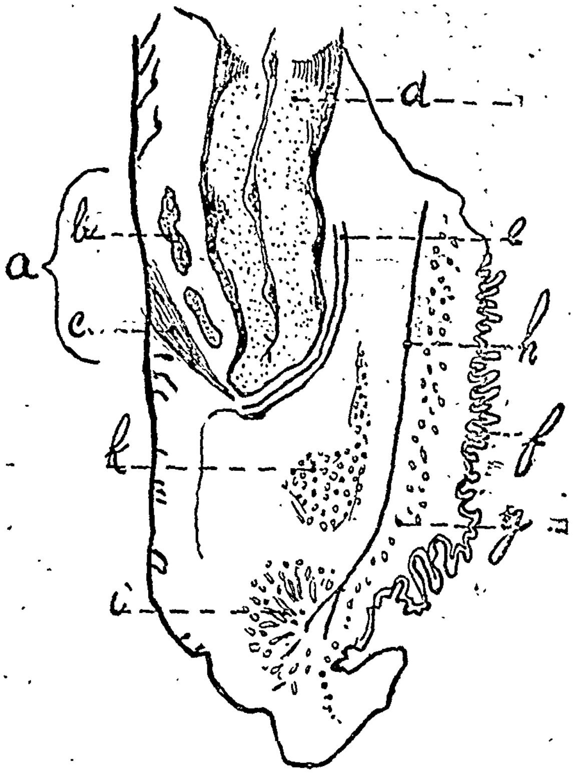

Fig. 3.—Sagittal section of caudal end of human female fetus of 16 by 23.5 cm. Enlargement 8.5/1 (from G. Hermann and F. Tourneux, cited in Note 8); a, "glabelle," surrounded by hair follicles; b, paracoccygeal medullary vestiges; c, caudal ligament; d, coccygeal vertebræ; e, caudal vein (anterior) and artery (posterior); f, mucosa of rectum; g, internal sphincter; h, longitudinal muscular layer of rectum; i, external sphincter; k, levator ani.

REPORT OF CASE

The following history I obtained Sept. 17, 1909, at the Central Free Dispensary (case No. 16118) of Rush Medical College in the department of surgery:

Patient.—Baby L. L., aged 7 days. When the child was born a swelling the size of a man's fist was noted in the perineal region. At birth the skin was smooth and white and of quite normal appearance. The swelling enlarged after birth and the skin took on a blue color. The grandmother, who brought the child to the dispensary on account of the swelling, mentioned no other defects or untoward symptoms. Urination and defecation were not interfered with. Father and mother were both living and well. The mother had had no miscarriages. This was the third child; the other two were strong and healthy and were 4 and 2 years old respectively. The birth of this child was normal; head presentation and no instruments used and no difficulty experienced in delivering the buttocks with the attached swelling.

Physical Examination.—The child was well nourished, strong and appeared healthy. The head was of normal size and fontanelles not enlarged. Eyes, nose and mouth were negative, as were also the chest and abdomen. The arm and leg movements were free and there was no sign of paralysis. From the right gluteal region protruded a pedunculated or rather sessile tumor almost as large as the baby's head. This growth extended from the gluteal fold below to the notch between the coccyx and gluteal muscle above, and from the greater trochanter laterally, to the median line of the body, where, extending into the perineum, it encroached on the vulva and the anus (Figs. 4 and 5). The skin covering the tumor was in a normal condition and there were no signs of old scars or inflammatory processes; it was smooth and presented no elevations or depressions. The color was white with faint blue tint where the skin was stretched tightly over the fundus of the tumor. At the apex of the fundus was a reddish discolored area the size of a quarter. Tortuous veins were clearly outlined over the surface of the swelling. A linear elevation of skin showed a white cord-like structure coursing over various parts of the swelling subcutaneously. When held to light the swelling was found to be translucent. The mass fluctuated distinctly. The white linear structure described above could be moved under the skin and felt like a piece of wet hemp string slipping under the palpating fingers. Posteriorly the coccyx was very movable and was pushed to the right side by the tumor mass. Above and to the left of the coccyx was felt a mass of cartilaginous consistency which was very movable. The tension of the swelling was not increased when the child cried. When pressure was made on the tumor, the volume of swelling was not diminished, nor were the fontanelles thereby affected, or any disturbances referable to the cord caused by so doing. (No rectal examination was made.) A puncture of the cyst was made for the purpose of diagnosis; an ounce of light yellow, turbid fluid was obtained which gave reaction for albumin and microscopically showed red cells.

X-Ray Examination.—On September 21, when ten days old, the patient was brought again to dispensary and was referred to the *x*-ray laboratory, where two views of the lower portion of the vertebral column were taken, one lateral, and one antero-posterior. The lateral view (Fig. 6) showed no abnormal condition of the spinal column; the cyst was well outlined and no solid contents seen within. The antero-posterior view (Fig. 7) again outlined the cyst and also showed the coccyx pushed to opposite side. There also appeared in the lumbar and sacrococcygeal region a linear area situated to the left side which was not shaded, while on either side of the same shadows were distinctly visible. This picture at first was thought to be of some value in throwing light on the genesis of the cystic swelling; the possibility of a spina bifida anterior with a meningocele was considered. But Dr. Potter, who took the *x*-ray pictures, interpreted the non-shaded area as the place between the two centers of ossification: T, the smaller shadow, being the ossific point of the transverse process and lamina on the one hand and B the larger, the ossific point of the body of the vertebræ. The reason a similar picture was not produced in the opposite side of the body was probably that the child was not lying perfectly straight. Another picture of a normal child ten days old was taken as a control to compare with this, and a somewhat similar condition was found.

Operation.—The patient was referred to Dr. Bevan, who operated on the child (September 29) when 19 days old. Under ether anesthesia two half-moon-shaped flaps, one anterior and one posterior to the tumor, were made, thus avoiding injury to the nerve and arterial supply to the perineum; the skin was readily stripped from the tumor mass and with slight hemorrhage the growth was followed to its insertion about the coccyx, a part of which had to be removed in taking away the mass. Some difficulty was experienced in separating the growth from the lateral wall of the rectum, which was pushed forward by the tumor, which almost filled the pelvis. The skin flaps with plenty of redundant tissue were brought together with silk and horsehair. Instead of the usual gauze dressing a zinc oxid paste was first applied over the sutured surface to protect the wound from infection from feces and urine. During the operation the surface of the sacrum was freely exposed and no bony defects were found. The child made an uneventful recovery.

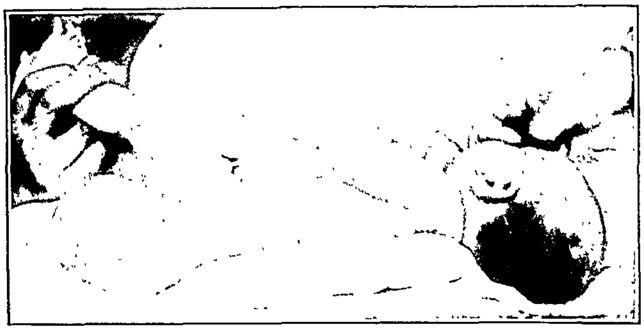

Fig. 4.—Sacrococcygeal cyst, showing extension of the growth downward from coccygeal region.

PATHOLOGIC REPORT

The gross specimen (Fig. 8) consisted of a mass almost the size of a new-born child's head, one half of which was covered with skin; the other presented an exposed area where skin was removed at operation. The mass on palpation felt like a sac full of fluid. At the center of the exposed area (Fig. 8, A) was a piece of cartilage (tip of coccyx) three-quarters of an inch long, one-fourth of an inch wide, and one-eighth of an inch thick, tapering to a point. At the side of the coccyx was an opening to a smaller cyst the size of a hen's egg. The lining of this cyst was smooth, shiny, and white. In the wall of this cyst were four nodules projecting the lining of the cyst forward, also causing an elevation on outer aspect of the cyst. These varied from the size of a BB shot to that of a pea. They were white and of a firm consistency. They cut with slight resistance and on cross-section presented a white homogeneous granular surface. A small cyst the size of a pea, punctured, emitted a clear white fluid. At the base of the attachment of the egg-shaped cyst to the large cyst was an annular thickening of firm consistency which was described in physical examination as a "mass of cartilaginous consistency and very movable." Diameter of base attachment is size of a quarter, the annular thickening itself is about one-fourth of an inch thick.

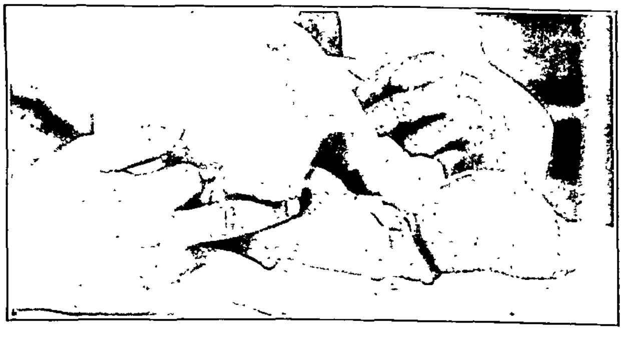

Fig. 5.—Infant lying on its back with legs flexed on its thighs; the tumor mass on the right displacing the anus and vulva.

The main large cyst was punctured (at B, Fig. 8), contents removed and cyst hardened *in toto* in 10 per cent. formalin.

The fluid contents of the cyst amounted to 400 c.c.; were light yellow in color; did not give reaction for the reduction of sugar; 1015 sp. gr.; gave reaction for albumin and showed under miscroscope red and epithelial cells.

The main cyst cut after hardening is shown in Figs. 9 and 10. Between the main cyst and the coccyx (A) were three smaller cysts (C) varying in diameter from one to three cm., the walls of which were thick (2 to 3 mm.) and of firm consistency, and were lined with a smooth and shiny surface. The wall of the large cyst was thin (1 mm.) over the fundus of the swelling, and a little thicker (2 mm.) nearer the coccyx. The skin could easily be separated from the cyst wall. The cavities of the cysts did not communicate with one another. The lining of the cyst was generally smooth and shiny, and presented three points of special interest; first, two nodules, second, three areas of depressed scar like tissue formation, and, third, several string-like growths of a heavy, white, fibrous-like tissue. The nodules (B, Figs. 9 and 10) were the size of split peas, projected beyond the inner surface of the cyst, and had a darker brown color than the rest of the cyst wall. They were similar to lymphatic glands in appearance. The scar like formations (D, Figs. 9 and 10) referred to had a punched-out border, and the base was composed of lines radiating to the center. The ulcer resembled the scar of a healed ulcer of the stomach. There were three of these scar formations; two about 5 cm. in diameter and one about 10 cm. Distributed irregularly over the cyst wall in varying thickness, from a mere line to several mm. in thickness, were the cord-like, linear elevations referred to in the physical examination (E, Figs. 9 and 10).

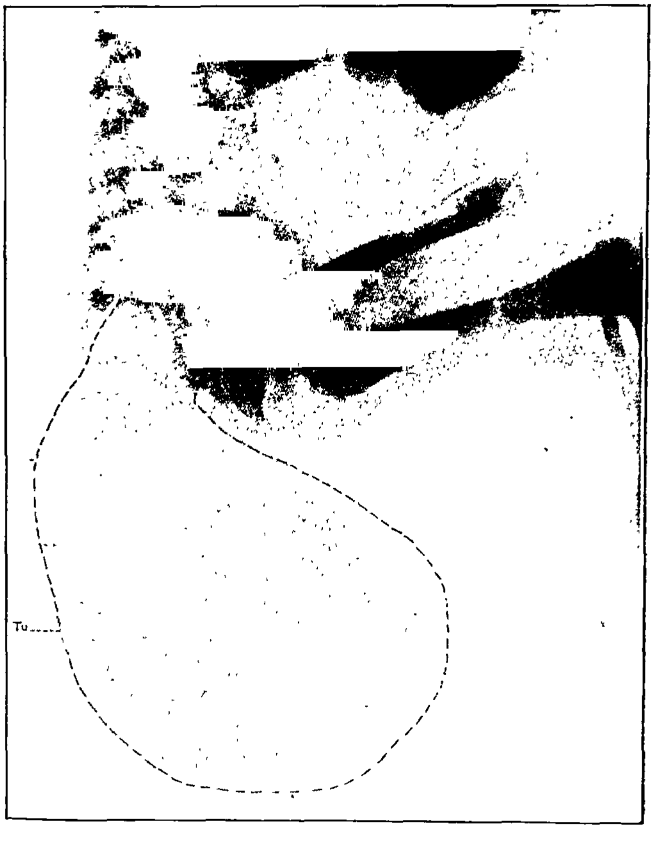

Fig. 6.—Lateral view of tumor (area inclosed by broken line) by *x*-ray.

Sections for microscopic study were taken from three points of interest (Fig. 9): Section I, to show portion of wall of cyst and skin covering it, white fibrous band, and portion of depressed ulcer-like area; Section II, a section of nodule; Section III, through annular thickening described above several blocks were cut in succession at this point and illustrations here will be referred to as III A, III B, and III C.

Section I (Fig. 11, Hematoxylin-eosin Stain).—There is a line of cleavage separating the skin from the cyst wall proper. The stratum corneum of the epidermis is thin; the stratum germinativum thick; the tela subcutanea is lacking in sudoriferous glands and panniculus adiposus, which are replaced by a fibrous connective tissue containing many young blood-vessels. The cyst wall proper (b) is composed of con-

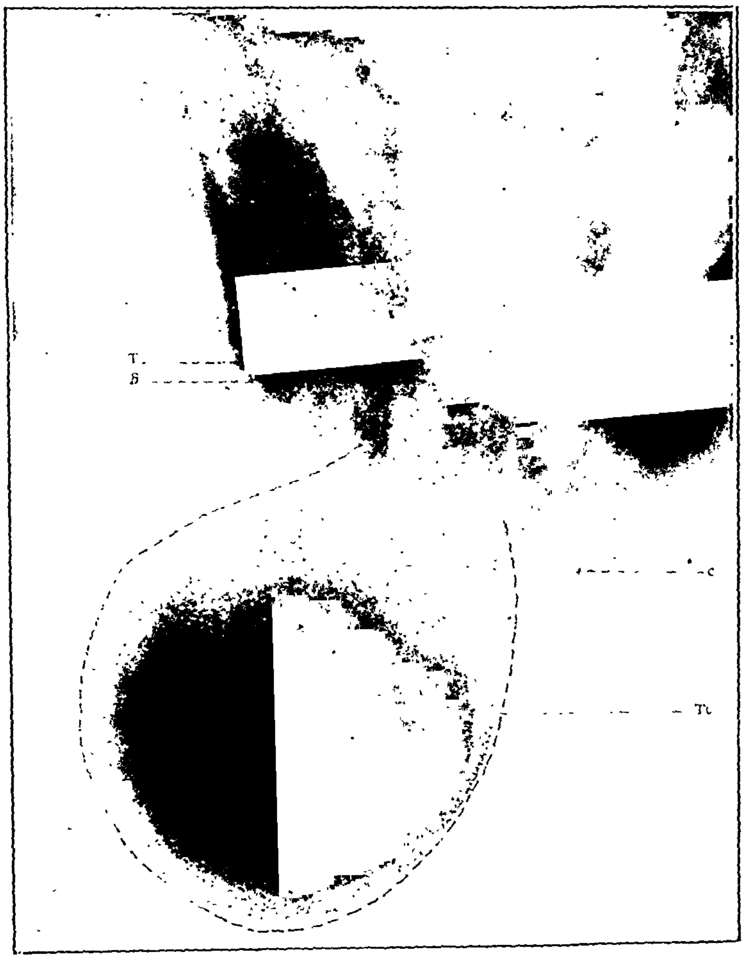

Fig. 7.—Antero-posterior x-ray view of tumor: Tu, tumor. c, coccyx displaced to the right; T, ossific point of transverse process; B, ossific point of body of the vertebræ

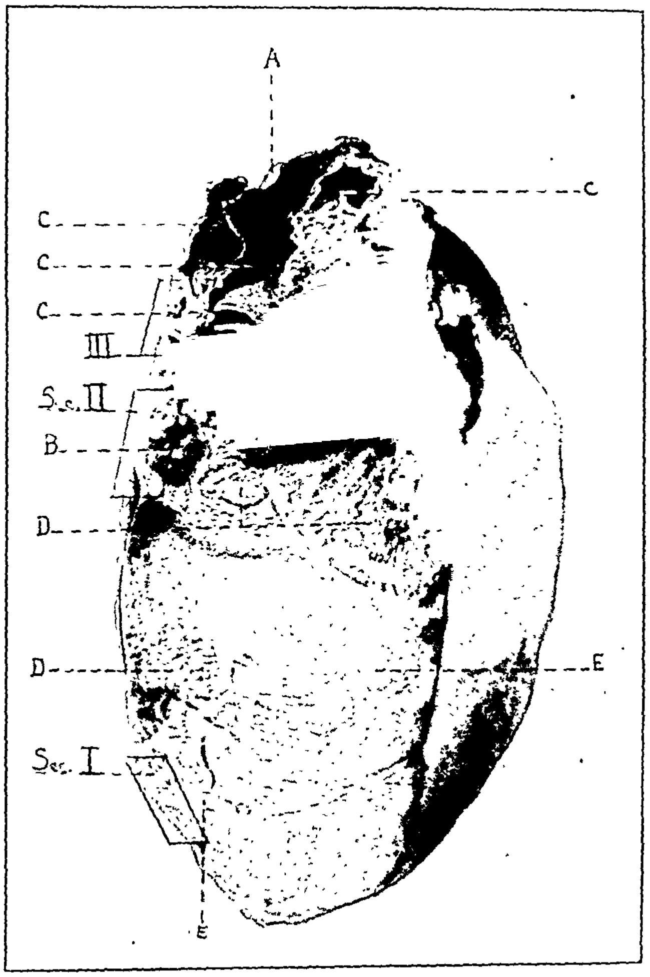

Fig. 9.—Tumor cut open after hardening; A, coccyx; B, nodule; C, cyst; D, scar-like formation; E, white fibrous bands.

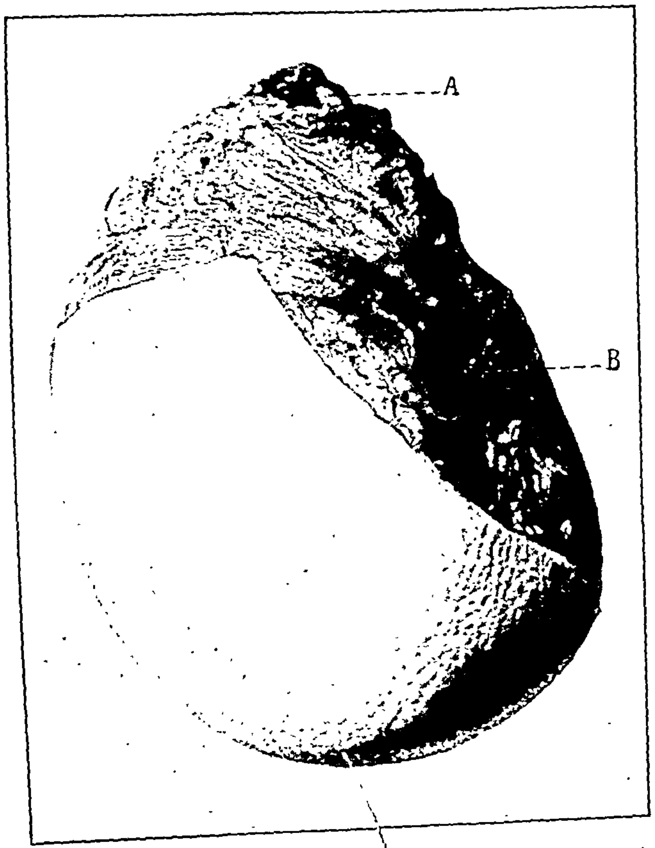

Fig. 8.—View of tumor after removal; A, coccyx; B, site of puncture.

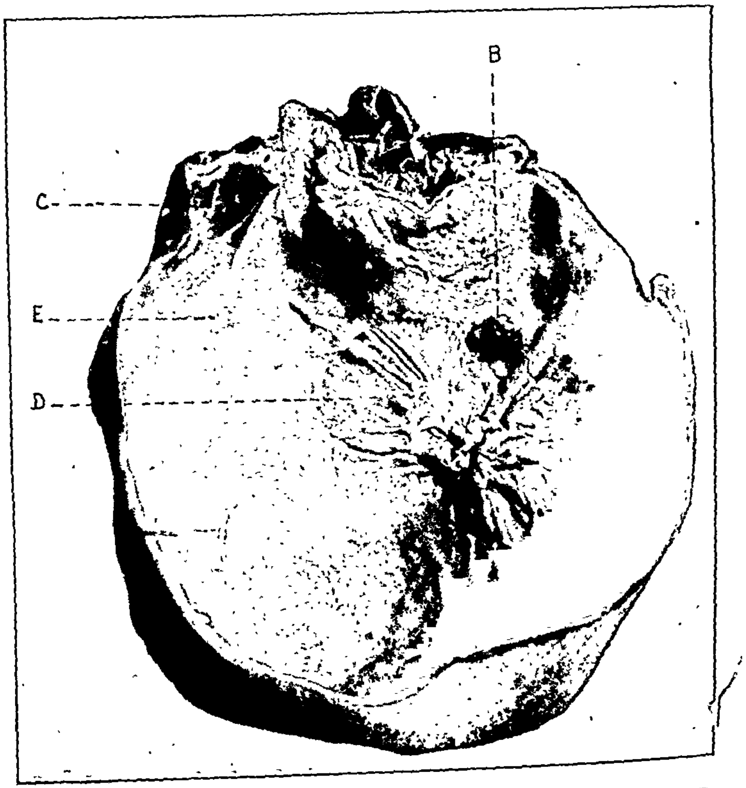

Fig. 10.—Other section of tumor cut open after hardening; B, nodule; C, cyst; D, scar-like formation; E, white fibrous bands.

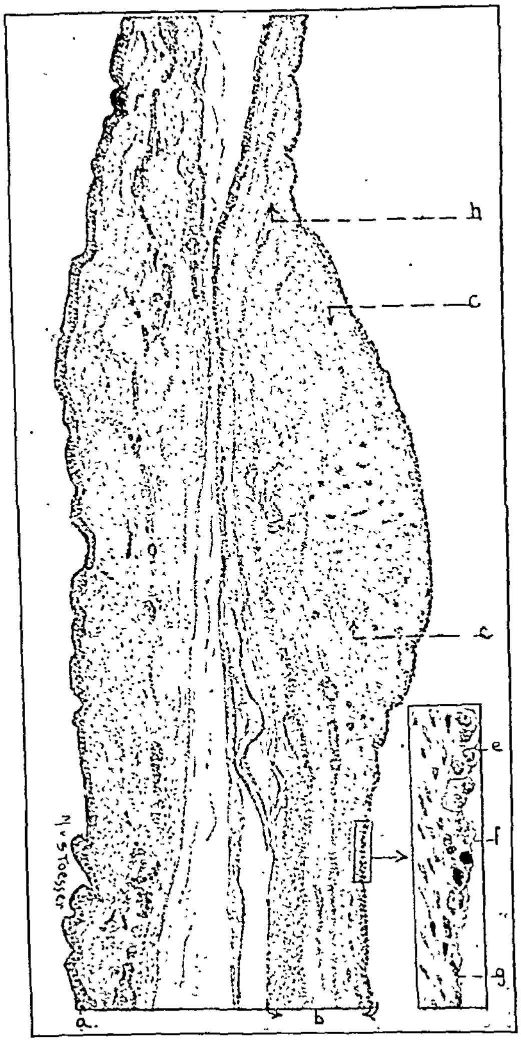

Fig. 11.—Section I (hematoxylin-eosin stain); a, skin; b, cyst wall proper; c, white fibrous band; d, lining of cyst—high-power drawing; e, cells of epithelial type; f, cells of endothelial type; g, cells of connective-tissue type; h, depressed ulcer-like area.

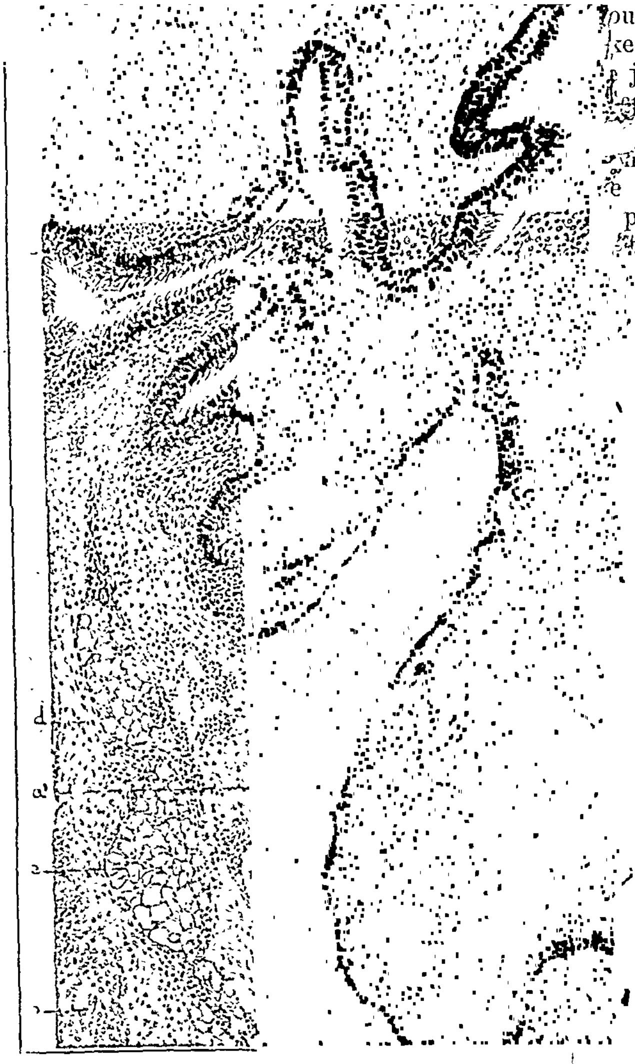

Fig. 13.—Section III B; a, ciliated ependymal cells; a', strat epithelial cells; b, island of glia cells; c, gland-like or tub arrangement of glia cells; d, connective tissue; e, fat cells.

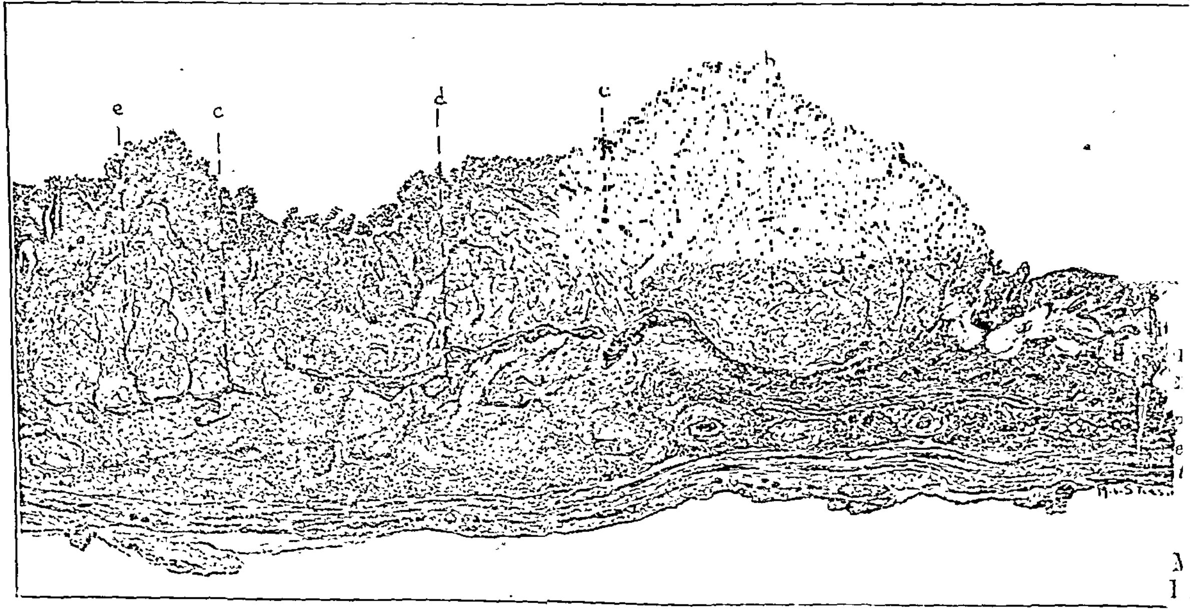

Fig. 12.—Section II (hematoxylin-eosin stain); a, islands of glia cells; b, glia cells in tissue rich in blood-vessels numerous; few blood-vessels; little intercellular reticulum; d, connective tissue; e, blood-vessels.

is paper I reported some typical cases of the two l forms of angiomata which are, as a rule, inoperable and, therefore, incurable by the knife. These venous angioma (cavernous nevus), the most t, and the arterial angioma (cirsoid aneurism), is less frequently observed.

e reporting these cases I have had a larger and atisfactory experience in the management of these s, and, in view of the results obtained, must emphahe importance of the method.

ice the injection of boiling water directly into the ance of a tumor composed largely of dilated and is blood vessels causes immediate coagulation, the it of the surgeon is the possibility of embole great dangers which would ensue from this . Of course, in dealing with arterial angioma, no such danger is present, for the reason that the capillaries stand between the coagulating blood and the heart and lungs.

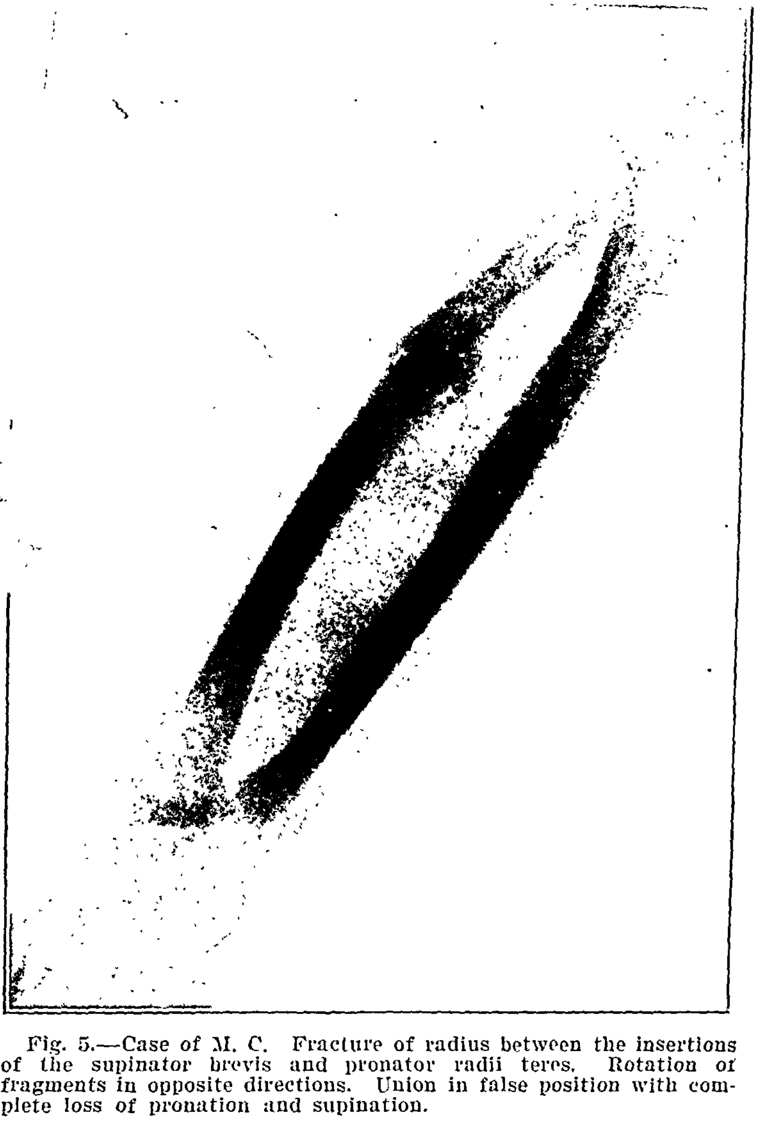

Fig. 5.—Case of M. C. Fracture of radius between the insertions of the supinator brevis and pronator radii teres. Rotation of fragments in opposite directions. Union in false position with complete loss of pronation and supination.

In venous angioma, however, the way is open, and, while I have not yet met with a single case of embolism, every precaution should be taken to prevent this accident.

Most of the neoplasms of this group which I have treated have been located in the neck, generally near the level of the lower jaw, and are in immediate relation to the external and internal jugular veins, as well as the carotid arteries and the large and important nerves of this region.

In the case which I now report, the danger of embolism was so great that I hesitated undertaking the operation, and only did it because the patient's condition was otherwise hopeless.

History.—The patient, F. D., a youth of 19 years, laborer, who, with the exception of the lesion to be described, was in perfect physical condition, came under my observation at the New York Polyclinic Hospital in 1907.

Examination.—Situated on the side of the neck in the line of the internal and external jugular veins, below the angle of the left jaw, was a vascular tumor which measured about three inches in two directions, and projected well beyond the level of the jaw, the tumor having a thickness of between two and three inches. It was of bluish color, and without pulsation. By steady compression, it could be practically emptied of blood and reduced almost to the natural level of the neck. When the pressure was released it filled rapidly and resumed its former size.

On account of the intimate relation of this tumor to the common, *internal* and external carotid arteries, the external and internal jugular veins and the pneumograstric, sympathetic, facial, and spinal accessory nerves, I hesitated to employ the hot water method for fear, first, of causing an embolism in the jugular vein or the internal carotid artery, the first of which would produce death by occlusion of the pulmonary circulation, and second by cerebral embolism and paralysis. A second danger, but one which was less immediate in its effect, was the injury to one or more of the nerves which have been enumerated.

Operation.—Impressed with these dangers, I advised and undertook the removal of this growth by dissection. The hemorrhage, however, was so alarming and seemingly uncontrollable that I was obliged to desist, and had considerable difficulty in arresting it by compression. Three weeks later the following operation was carried out successfully:

To prevent the possibility of pulmonic embolism, the internal jugular was exposed and temporarily occluded by passing around it a large-sized catgut ligature which was twisted and held firmly by an artery clamp. A similar ligature was then thrown around the common carotid artery, and this vessel was in like manner temporarily occluded. The object of this last ligature was to reverse the current of blood in the internal carotid. Blood, like all moving substances, must travel in the direction of least resistance, and in order to prevent the possibility of cerebral embolism, I relied on the force of the unimpeded current to the brain through the internal carotid of the opposite side, and the free anastomosis through the circle of Willis, to carry the blood into the artery of the left side, the stream traveling temporarily downward in its distribution through the branches of the external carotid.

The metal syringe was then filled with boiling water, the piston inserted, and under the barrel of this was held an alcohol lamp in order to keep the water at the boiling temperature. Taking the usual precautions to prevent scalding, by holding a gauze pad in front of the needle as it approached the tumor (for the escape of steam and water from the needle cannot be prevented), the needle was thrust through the gauze as it touched the tumor, and carried well toward the further side of the mass. From ten to fifteen minims were then injected and withdrawing the needle half an inch, this was repeated, until the entire tumor was rapidly subjected to the contact of the hot water.

The result was an immediate coagulation or solidification of the mass. I waited fifteen minutes to satisfy myself of the absence of coagulum in the internal jugular, which could readily have been recognized by the sense of touch. I then removed this ligature. The catgut around the common carotid was then removed.

Result.—There was no suggestion of paralysis and no change in the pupils during or after the operation. The patient made an uninterrupted recovery, has been kept under observation, and now after three years is entirely well. There is no suggestion of a tumor or swelling in the neck, the two sides being symmetrical and normal.

VII. DEMONSTRATION BY EXPERIMENTAL STUDIES ON ANIMALS AND OPERATIONS ON HUMAN BEINGS, OF THE PROCESS OF PERMANENT ARTERIAL OCCLUSION AFTER DELIGATION[3]

April 26, 1882, I presented to the New York Pathological Society a series of specimens which showed the results obtained by the use of broad animal ligatures applied to arteries in continuity. One of these specimens was the carotid artery of a woman which I tied in September, 1881, using the sciatic nerve of a calf which had been made aseptic by treatment in carbolic acid solution. This ligature was not quite one-fourth of an inch in width. The artery was tied just tightly enough to entirely arrest the circulation without doing violence to the inner elastic layer. The patient died seven months after the operation from an intercurrent disease. The artery was completely occluded and its continuity unbroken. There was a slight depression, one-fourth of an inch in width, which marked the exact location of the ligature, every other trace of which had disappeared.

I presented at the same meeting the carotid and subclavian arteries of another patient which I had tied with a broad ligature made of ox aorta after the method of Mr. Richard Barwell of London. This operation had been done for the cure of an aneurism of the ascending segment of the aorta, which operation had proved successful. The patient died one year later from enterocolitis. The occlusion of the arteries was complete, and the condition the same as in the case first reported.

I also presented the carotid artery of a large dog tied experimentally with the nerve ligature. The animal was killed five weeks later, and, as shown, the artery was completely occluded and the continuity of the inner layer seemingly unbroken. In another specimen the carotid artery of a horse was shown. In the application of this ligature, the lumen of the vessel was intentionally not entirely occluded, permitting a portion of the blood current to pass through. Mounted sections of these arteries showed active proliferation in all the normal cells of the arterial wall, most marked in the connective tissue group. They demonstrated that arterial occlusion was the direct result of cell proliferation and the resulting fibrillation and contraction of the new cells of the inflammatory process caused by the traumatism or irritation of the constricting band or ligature.

Scarpa had advanced the idea many years before that it was not necessary to constrict an artery with a ligature forcibly enough to break even the internal elastic layer. Jameson of Baltimore, with this same idea in mind, had later recommended broad animal ligatures made of deer-tendon, but the fact that the clot was an accident of, rather than a factor in, arterial occlusion after the ligature and that closure was due to cell proliferation, *was now for the first time demonstrated.*

When I found in the work of Ballance and Edmunds on "Ligation in Continuity," published in 1891, no mention of these researches, I addressed to them a letter calling their attention to it, and received the following reply:

"LONDON, ENGLAND, Sept. 24, 1894.

Dear Sir:—We are much obliged to you for your kind letter with respect to our book. Its main conclusion is identical with that at which you had arrived long before. We congratulate you on the result of your ligations. Yours very truly,

CHARLES A. BALLANCE,
WALTER EDMUNDS."

VIII. LIGATION OF THE EXTERNAL CAROTID ARTERY

Ligation of the external carotid artery for any lesion in the distribution of this vessel is comparatively a modern operation. Prior to 1878, when the investigations which were given in my "Essays on the Arteries"[4] were made public, in the entire history of surgery the external carotid artery alone had been tied only sixty-nine times. Practically all of these operations were done in ignorance of, or without regard to, the accepted rules laid down in the text-books, for there was then not a work on surgery in the English or any other language, to my knowledge, which did not advise the ligation of the common carotid, rather than the external branch, for a lesion in the distribution of the external carotid alone.

It was said in justification of this position that the branches of the external carotid artery were so irregular in their origin, and at times so close together, that there was not space enough to permit the application of a ligature to the trunk of this vessel.

It had occurred to me as early as 1874 that, as this was the only artery in the human body which was given as an exception to the general law of development, there might possibly be some error in the deductions given in the text-books on surgery and anatomy.

In my investigations I made 121 dissections of the neck with special regard to the terminal divisions of the common carotid. The origin of each of the six regular branches of the external carotid, the distance from the center of bifurcation of the common trunk, and their relations to each other were carefully measured and noted, with the result that it was demonstrated that the external carotid did not differ from the other arteries in the arrangement and relation of its branches, and that it could be ligated in any part of its course as safely as any other artery in the body.

In these essays I collected the histories of 789 cases in which the common carotid artery had been ligated for all causes, with a death-rate of 41 per cent., while in the 69 cases in which the external carotid alone had been ligated—in disregard to the text-books—the death-rate was only 4.3 per cent., a difference in the mortality ratio as based on the results of surgical methods at that time of 36.7 per cent.

When these essays were made public by the American Medical Association, the conclusions reached were universally accepted,[5] and there is to-day not a work on surgery which does not advise the deligation of the external instead of the common carotid artery in all cases for a lesion within the distribution of the former.

The external carotid artery has now been tied in thousands of instances, and the death-rate under the improved technic is practically *nil.*[6] The following is quoted from the report for 1878 of the Committee on Prize Essays of the American Medical Association:

> One paper, in the judgment of your committee, is fully up to the requirements, and should be considered as *two* rather than *one* essay. The analysis of 789 cases of operation on the (common) carotid artery and the careful and minute measurements of the (external) carotid artery and its branches in 121 subjects, showing the range of variation and the percentage of the same, followed by inferences, bold and original, naturally constitutes *a paper complete in itself. Another essay on the same*

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[3] Published in the Tr. New York Path. Soc., 1882, Med. Rec., July 22, 1882; and in Wyeth: Text-Book on Surgery, 1887, p. 171.

[4] Prizes of the American Medical Association, awarded in 1878; The Surgical Anatomy and Surgery of the Common, External, and Internal Carotid Arteries, and The Surgical Anatomy and Surgery of the Innominate and Subclavian Arteries, William Wood and Co., New York, 1879.

[5] For the immediate acceptance and establishment of these conclusions I was greatly indebted to the late Prof. Henry B. Sands, one of the foremost American surgeons.

[6] I have tied this vessel in several hundred instances without a death, and in three cases the ligature rested exactly in the crotch *of bifurcation of the common trunk.*

> plan with reference to the innominate and subclavian being an analysis of 300 cases, and the observation of 52 subjects, is presented to us in such a maner that we may consider the whole as one prize, or they may compete for both. Your committee believe that both prizes should be awarded to the two essays by one person.

In the American edition of Bryant's Manual for the Practice of Surgery,[7] from the section devoted to this subject, the following is quoted:

> In this connection the views of Dr. John A. Wyeth of New York deserve great attention, for, in his prize essays, presented to the American Medical Association in 1878, he has investigated the subject of ligation of the primitive carotid artery and its branches with such painstaking accuracy that his paper will deservedly become classical. He has collected and analyzed 789 cases of ligation of the common carotid artery, 91 instances of ligation of the external, and 18 of ligation of the internal carotid. In addition, he has given accurate measurements of the arteries in 121 subjects, showing the range of variation and the position of branches. His inferences from this astonishing amount of research are at variance in some respects with the surgical teaching and practice of the day, but it would seem that the profession must be in the wrong, rather than he, who has considered the subject in such a thorough and scientific manner.

IX. BLOODLESS AMPUTATION AT SHOULDER AND HIP

In 1889 I devised the bloodless operation for amputation at the shoulder-joint by elastic constriction over the scapula and pectoral regions, completely controlling the blood supply to the upper extremity. At this operation the applicability of the same idea to hip-joint disarticulation occurred to me, and within a year I did my first bloodless amputation at the hip joint. Both operations were first performed in the surgical amphitheater of the New York Polyclinic Medical School and Hospital.

When the conditions render it permissible, the arm may be emptied of blood by applying Esmarch's elastic bandage. If, on account of the lesion present, this is not advisable, elevation of the member will in large measure allow the blood to gravitate into the body. Two good-sized mattress needles, or preferably the pins specially devised by me, are employed as follows:

The anterior one is inserted through from two to three inches of skin, pectoral muscle and fascia, far enough within the scapulo-humeral articulation to permit free approach to the joint. This pin is anterior to, and does not endanger the vessels. The other is inserted posteriorly over the scapula at the same relative position, and both points are at once shielded with cork. A piece of elastic rubber tubing about half an inch in diameter is wound tightly around the shoulder on the proximal side of the pins. The cumulative pressure of the tourniquet traveling three or four times over the same surface completely closes the blood vessels.

Disarticulation can be accomplished by any of several methods. My own preference, when conditions permit, is a longitudinal incision from the acromion process down to the joint, splitting the deltoid fibers for a sufficient length. From its lower end, a circular or oval incision is carried around the arm, completely dividing the vessels and other soft tissues. The cuff is raised from the bone and the disarticulation effected. The blood vessels are secured, and,as a precautionary measure before closing the wound, the tourniquet may be momentarily relaxed in order to demonstrate any bleeding points which may have been overlooked. This operation has been done in a number of instances, and the hemostasis has been complete in every case.

The bloodless method of disarticulation of the hip-joint was first done by me in February, 1890, and made public before the Nashville meeting of the American Medical Association in that year. The technic is as follows:

The patient is placed with the sacrum resting on the corner of the operating table. The extremity is emptied of blood by elevation of the foot, and, when permissible, by the application of the Esmarch bandage. Two large steel needles about 3/16 of an inch in diameter and ten inches long, are employed. One of these is introduced 1/4 of an inch below the anterior superior spine of the ilium and slightly to the inner side of this prominence, and is made to traverse superficially for about three inches the muscles and fascia on the outer side of the hip. The direction is at right angles to the plane of the body. The point of the second needle is thrust through the skin and tendon of origin of the adductor longus muscle half an inch below the crotch, the point emerging an inch below the tuber ischii. The points should be shielded at once with heavy cork to prevent injury to the hands. No vessels or nerves are endangered by these skewers. A mat or compress of sterile gauze about two inches thick and four inches square is laid over the femoral artery and vein as they cross the brim of the pelvis. Over this a piece of strong rubber tubing 1/2 an inch in diameter when unstretched, and long enough when in position to go five or six times around the hip, is now wound very tightly around and above the fixation needles and secured with a strip of ordinary bandage. If the Esmarch bandage has been employed, it is now removed. The extremity is bloodless, and will remain so.

In the formation of the flaps the surgeon must be guided by the condition of the parts within the field of operation. When permissible, the following method is preferred:

A longitudinal incision commencing at the tourniquet is carried over the trochanter major a sufficient distance down the thigh to form a suitable flap. This is joined at the lower end by a circular incision. A cuff that includes everything down to the muscle is dissected up to the level of the trochanter minor. At about this level the remaining soft parts, together with the vessels, are divided squarely down to the bone by a circular cut. At this stage of the operation, the divided proximal ends of the great femoral vessels are in plain view and should be tied with good-sized catgut. This done, disarticulation is rapidly completed by dividing the muscular insertions from the trochanter and digital fossa, keeping very close to the bone and holding the soft parts away with retractors. The capsular ligament is now exposed and divided, and by forcible elevation, adduction and rotation of the femur, the joint is opened, the ligamentum teres ruptured and the head of the bone dislocated. The remaining vessels, including the saphenous vein, should now be secured—the sciatic artery alongside the nerve, the obturator between the stumps of the adductor brevis and magnus, two or three good-sized branches of the external circumflex beneath the rectus and in the substance of the crureus and vastus externus. The descending branches of the internal circumflex are insignificant, and are usually found on the level of the femoral vessels in the substance of the adductor longus and between it and the adductor brevis and pectineus.

In tying the larger femoral vessels I make it a rule to dissect both the superficial and deep femoral stumps back from one-half to three-fourths of an inch in order to apply the ligature behind any branches which may have been divided close to their points of origin, and I do not hesitate to include the large veins in the same ligature in order to save time. Before closing the stump, it is a wise precaution to loosen the tourniquet in order to see that no bleeding point has been overlooked. The considerable oozing which otherwise would occur from so large a surface may be controlled by introducing a gauze pack into the cotyloid cavity, the end of which is brought out between the flaps for drainage, and then making firm compression with the bandage which holds the dressing on the stump.

The operation has been generally accepted and practiced now in many hundreds of cases. The death-rate from gunshot wounds during the civil war in America was 93 per cent. and between 40 per cent. and 50 per cent. in civil practice in the years preceding the adoption of the method herewith described. It has now been reduced, under modern conditions of hemostasis and asepsis, to about 8 per cent. in disease and 16 per cent. in traumatic cases.

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[7] Manual for the Practice of Surgery, by Thomas Bryant, F.R.C.S., Surgeon to and Lecturer at Guy's Hospital; edited by Professor John B. Roberts, Philadelphia, 1881, p. 366.

In the *Annals of Surgery*, September, 1895, Dr. John F. Erdman reports that from January, 1884, to January, 1895 (the aseptic period) there were eighteen hip-joint amputations done in Bellevue, Roosevelt, St. Luke's, Mt. Sinai, Chambers Street, German, and Presbyterian hospitals in New York City, with eight deaths, a mortality of 44.4 per cent. Of the eighteen patients, seven were operated on by the method here described, and all recovered, leaving eight fatal cases in eleven amputations by other methods, a death-rate of 72.7 per cent. I do not claim that such a death-rate as this would follow by any other method of operation, but I do insist that my method of hemostasis is so simple and generally applicable that it removes from the procedure all possible danger of operative hemorrhage.[8]

THE TREATMENT OF SARCOMA BY STREPTOCOCCUS AND PYOGENIC INFECTION

That erysipelas has an inhibitory influence on sarcoma, which is at times curative in its effect, has long been known.

In 1882 there was admitted to Mt. Sinai Hospital, in the service of my colleague, Dr. A. G. Gerster, a young woman, suffering with sarcoma of the leg, for which an amputation was made just above the knee. A recurrence took place, followed by a hip-joint disarticulation. The disease again appeared in the stump, developing rapidly into an extensive cauliflower-like mass which became accidentally infected with erysipelas. This infection ran the usual course of erysipelas, during the progress of which the tumor began to diminish in size and eventually it entirely disappeared. In 1907, more than twenty-five years after this experience when this patient was last heard from, she was entirely well, and still actively engaged in her work as a school teacher.

The experiments of Fehleisen and others by direct infection with the *Streptococcus erysipelatis* have confirmed the result in the case above narrated.

Two years later, in my service at Mt. Sinai Hospital, I had the following experience which has since been repeatedly confirmed, namely, that pyogenic infection was capable of producing the same result.

J. P., aged 28, was admitted May 20, 1884, with the following history: A year previous he had received a blow on the abdomen over the right iliac region, which was followed by induration and the development of a neoplasm. At the time of examination, the tumor was 4 by 6 inches in surface measurement, and about 3½ inches in thickness. On account of the involvement of the abdominal wall, it was found impossible to remove it. A section extending almost entirely through the mass was excised and examined by Dr. William H. Welch and two other competent pathologists. The diagnosis of each was spindle-celled sarcoma. Having noticed in a current medical periodical the report of a case of sarcoma, said to have been cured by the direct injection into the substance of Fowler's solution of arsenic, in view of the hopelessness of the patient's condition, I advised this treatment. I began with injections in two or more portions of the mass of from one to three minims of this solution, gradually increasing the quantity to as much as ten minims. These injections were repeated daily for four or five days, then every other day for about ten days. They became so painful that at the patient's request the treatment was discontinued. The increased pain was occasioned no doubt by a pyogenic infection which had supervened. The tumor became red and swollen, and pitted on pressure. The skin did not have the glazed or "stove-polish" appearance of erysipelas, but rather the look of a severe dermatitis. The infection proved to be pyogenic, and several incisions were necessary to permit the free discharge of pus. The patient suffered very considerably from the high temperatures due to septic absorption, but after a period of about two weeks, the tumor began to diminish in size, and with this there was a general improvement in his condition. Four months later his physician, Dr. A. H. Conson of Gainesville, informed me that the tumor had entirely disappeared. The patient regained his former condition of health and survived, without recurrence, eighteen years, and until a few days before his death from acute pneumonia, was hale and hearty, his weight at that time being 170 pounds.

So far as I am able to learn, this was the first known case of a cure of sarcoma by an infective process other than erysipelas. This experience has since been confirmed in a number of instances, one of the most remarkable and instructive of which is the following:

In 1893, J. P., aged 35, of Augusta, Georgia, consulted me in regard to a large tumor occupying the right hypochondriac region. He was anemic, greatly emaciated, and had the marked cachexia of a malignant growth. On account of ascites, he had been tapped on three occasions, and I removed at one operation five gallons of fluid from the peritoneal cavity. With the collapse of the abdominal wall there was felt a hard, round, slightly movable tumor 4 or 5 inches in diameter. It was exposed by an incision about 6 inches in length. To the touch, the tumor was firm, slightly elastic, and occupied the space between the stomach and liver, having developed from the gastrohepatic omentum. It was of a reddish-brown color, and covered in front with a network of large vessels. On account of its vascularity and the feeble condition of the patient, I did not venture to remove a section for microscopic examination, but from its location and macroscopic appearance I have no doubt that it was a sarcoma. The edges of the abdominal incision were retracted so as to permit about one-third of the anterior surface of the mass to present in the wound, while sterile gauze was inserted to secure adhesions and to prevent any general peritoneal infection. Three days later this packing was removed, and the wound and the exposed surface of the tumor were permitted to become infected. Suppuration was soon established; the dressings were changed daily, and within two weeks' time there was a noticeable diminution in the size of the mass and an improvement in the patient's general condition. This wound was kept open, and allowed to suppurate for about two months, at the end of which time, as well as I could estimate, the neoplasm had diminished about one-half its original size. After the wound healed, the shrinkage continued, and six months after the operation it had disappeared. The patient's general health became better from day to day. Five years later I operated on him for hemorrhoids. A few years after his recovery, he married, and is the father of a number of children, and to-day, after a lapse of seventeen years, is in the enjoyment of excellent health.

244 Lexington Avenue.

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[8] With the introduction of Esmarch's elastic bandage, it was employed in various ways in the effort to control hemorrhage in hip-joint disarticulation. In the Lancet, 1883, i, 897, *Jourdon-Lloyd* described a method in which "a strip of black India rubber bandage about two yards long is doubled and passed between the thighs, its center lying between the tuber ischii of the side to be operated on and the anus. The ends are drawn tight, one in front, and one behind, to a point above the center of the iliac crest."

Trendelenburg endeavored to improve on this method by adding transfixion with a single needle which was passed in front of the neck of the femur and beneath the great vessels. A rubber cord in figure-of-eight fashion was carried over the ends in front, compressing the anterior, vascular portion of the flap.

Fourneaux-Jourdon's plan was a figure-of-eight rubber spica, using the Esmarch bandage in practically the same manner as Jourdon-Lloyd.

Richard Volkmann endeavored to control hemorrhage by circular constriction without needles. His three cases were reported in the *Deutsche Klinik* of 1868, but in each case a preliminary ligature of the femoral was done. That this method was not accepted is evident in the fact that neither in Billroth and Luecke's *Deutsche Chirurgie*; in the *Handbuch der Chirurgie* by Von Pitha; the works of Linhart, nor in the *Centralblatt fur Chirurgie* or *Klinische Vorträge*, of which Volkmann himself was an editor, is there any mention or description of this procedure. I never read or heard of Volkmann's discarded operation until several years after my method had been made public and had been generally accepted by the profession. Of the method, Professor W. W. Keen, of Jefferson Medical College, in a report dated January, 1892, says: "It was reserved for an American surgeon to devise what is undoubtedly the best method, and in fact, what I think we can now call the only method of hemostasis in amputation at the hip-joint."

TABLE 3.—TEMPERATURE OF MONKEY 12 AFTER BEING BITTEN BY INFECTED LICE

	A. M.		P. M.	
	F.	C.	F.	C.
January 23	.....	....	103.2	39.5
January 24	.....	....	103.6	39.8
January 25	103.4	39.7	103.4	39.7
January 26	103.6	39.8	103.9	39.9
January 27	102.7	39.3	104.3	40.2
January 28	102.6	39.2	103.2	39.5
January 29	102.9	39.4	101.9	38.8
January 30	104.2	40.1	103.0	39.4
January 31	103.3	39.6	104.2	40.1
February 1	103.0	39.4	104.0	40.0
February 2	102.7	39.3	103.6	39.8
February 3	103.7	39.8	103.4	39.7
February 4	103.7	39.8	103.3	39.6
February 5	103.6	39.8	104.0	40.0
February 6	103.4	39.7	103.5	39.7
February 7	102.1	38.9	103.7	39.8
February 8	.....	....	103.7	39.8

A definite course of fever cannot be made out positively. If present, it would appear to lie between January 30 and February 5 or 6, a period of seven or eight days, and the incubation period would be seven or eight days. On February 2, the animal was manifestly ill, in contrast to its former active condition, and this condition continued for four or five days. On February 9, however, it was again active and appeared well. At this time an immunity test was given; the temperature is given in Table 4:

TABLE 4.—TEMPERATURE OF MONKEY 12 AFTER IMMUNITY TEST

	A. M.		P. M.	
	F.	C.	F.	C.
February 9	103.9	39.9	103.9	39.9
February 10	102.5	39.2	103.9	39.9
February 11	103.3	39.6	103.9	39.9
February 12	103.1	39.5	103.7	39.8
February 13	102.9	39.4	103.4	36.7
February 13	102.9	39.4	103.4	39.7
February 15	102.7	39.3	104.3	40.2
February 16	102.3	39.1	104.4	40.2
February 17	102.9	39.4	103.5	39.7
February 18	103.2	39.5	103.5	39.7
February 19	103.2	39.5	104.1	40.1
February 20	101.9	38.8	103.7	39.7
February 21	102.9	39.4	103.6	39.7
February 22	102.6	39.2	102.8	39.3
February 23	102.4	39.1	102.9	39.4
February 24	101.1	38.3	103.2	39.5
February 25	102.9	39.3	102.4	39.1
February 26	102.4	39.1	103.7	39.7
February 27	102.4	39.1	102.6	39.2

Continued similarly for twelve days more.

The controls were Nos. 3, 24 and 25, already cited. A second immunity test resulted in the same way. No. 20 (see above) being the control. During neither of the immunity tests did the animal show any sign of illness.

No. 25 is a particularly good control for No. 12, since, like the latter, its temperature was naturally high and irregular. The course of fever was as shown in Table 5:

TABLE 5.—TEMPERATURE OF MONKEY 25, CONTROL OF NO. 12

	A. M.		P. M.	
	F.	C.	F.	C.
February 9	103.9	40.	104.4	40.2
February 10	104.0	40.	104.0	40.0
February 11	103.3	39.6	104.1	40.1
February 12	103.9	40.	103.2	39.6
February 13	103.5	39.7	103.6	39.8
February 14	102.5	39.2	103.3	39.6
February 15	100.9	38.3	103.9	40.0
February 16	103.4	39.7	103.9	40.0
February 17	102.3	39.1	103.2	39.6
February 18	102.5	39.2	105.2	40.7
February 19	104.6	40.3	105.5	40.8
February 20	103.7	39.8	104.4	40.2
February 21	104.4	40.2	104.4	40.2
February 22	104.2	40.1	104.7	40.4
February 23	106.3	41.3	106.8	41.5
February 24	106.2	41.2	105.8	41.0
February 25	104.6	40.3	104.5	40.3
February 26	105.8	41.0	104.2	40.1
February 27	103.6	39.8	103.2	39.5
February 28	101.6	38.7	102.9	39.4

Continuing as before the fever appeared.

In our opinion, the result justifies the conclusion that No 12 was infected by the lice of Group 5.

INFECTION OF THE MONKEY BY INTRODUCING INTESTINAL CONTENTS OF LICE INTO SCARIFICATIONS

A first experiment, which consisted of the subcutaneous injection of the intestinal contents of infected lice, resulted in death in less than twenty-four hours, from septicemia.

A second experiment was performed as follows: As the lice of Group 5 were feeding on Monkey 12, a small quantity of feces was collected from a number of the lice as it was extruded, and placed in a sterile test-glass. To this material the abdominal contents of three lice were added and the mass was triturated in sterile salt solution. This was done three days after the last feeding of the lice on the infected Monkey 7.

Twelve small incisions, each less than one-eighth inch in length, and extending through the entire depth of the skin, were made in the abdominal skin on Monkey 13. The emulsion of feces and abdominal contents was then instilled into these incisions, which thereafter were massaged by means of a sterile probe. The incisions healed promptly and without suppuration. The temperature of No. 13 was as shown in Table 6:

TABLE 6.—TEMPERATURE OF MONKEY 13 AFTER INFECTION WITH ABDOMINAL CONTENTS OF INFECTED LICE

	A. M.		P. M.	
	F.	C.	F.	C.
January 26	102.7	39.3	103.4	39.6
January 27	102.4	39.1	103.6	39.7
January 28	100.3	38.0	102.1	39.0
January 29	102.2	39.0	101.9	38.8
January 30	102.8	39.3	104.0	40.0
January 31	103.3	39.6	103.9	40.0
February 1	103.0	39.4	103.8	39.8
February 2	102.2	39.0	103.8	39.8
February 3	104.4	40.2	102.4	39.1
February 4	103.7	39.8	103.0	39.4
February 5	102.4	39.1	103.1	39.5
February 6	101.8	38.7	102.1	39.0
February 7	102.0	38.8	103.0	39.4

As appears in the table, the temperature rose on the fifth day after inoculation and remained above the normal for this animal for five or six days. During this period the animal became passive and was not inclined to run about, although it was not seriously ill at any time.

As a consequence of an immunity test given on February 9, the animal showed no febrile reaction whatever and appeared perfectly well, whereas the controls (Nos. 3, 24 and 25) reacted with severe fever, as stated above. A second immunity test, given a month later, gave the same results, the control in this instance being No. 20 (see above).

In our judgment, this experiment proves the existence of the virus of typhus fever in the abdominal contents of the louse for at least three days after feeding on infected blood.

SUMMARY AND CONCLUSIONS

1. It seems that *Macacus rhesus* can be infected with tabardillo invariably by the injection of virulent blood from man taken on the eighth to tenth day of fever. The blood should be diluted with salt solution, as stated previously.

2. Attempts to maintain typhus in the monkey by passage through other monkeys were not successful.

3. The monkey may pass through an attack of typhus so mild that it cannot be recognized clinically. Vaccination results.

4. The immunity test is a reliable proof of the previous occurrence or non-occurrence of typhus at least within a period of one month.

5. Typhus was transmitted to the monkey by the bite of the louse in two experiments, the lice in one instance deriving their infection from man and in another from the monkey.

6. Another monkey was infected by typhus through the introduction of the feces and abdominal contents of infected lice into small incisions.

Other experiments, in which the immunity tests have not yet been given, corroborate the carrying power of the louse.

As to whether these experiments on transmission are to be considered merely as substantiating that of Nicolle, or whether they should be regarded as new observations, will depend on the identity or non-identity of tabardillo with the Old World typhus. If *Macacus rhesus* is susceptible to the direct injection of blood from patients suffering from tabardillo, and not to the injection of the blood of the Old-World typhus, the two diseases in our judgment cannot be regarded as identical, although they may be closely related. As stated in a previous paper, Nicolle was unable to infect the macacus directly with human blood, but succeeded first in infecting the chimpanzee and then the macacus by the injection of blood from the chimpanzee. Nicolle's result, if it is to be regarded as final, when compared with ours and with those of Anderson and Goldberger, seem to indicate non-identity of the disease in the two localities.

It would seem that Nicolle's work, at least in this regard, demands repetition. Possibly, also, the point may be elucidated further by determining whether an attack of Old-World typhus confers immunity to tabardillo.

We are greatly indebted to Director Gaviño of the Bacteriologic Institute, to his assistant, Dr. Girard, to their superiors of the Department of Public Instruction, to the authorities of the General Hospital of the City of Mexico in particular to Dr. Escalona, for their numerous courtesies and cooperation.

A PRELIMINARY REPORT OF THE PEDIATRIC DEPARTMENT OF AN OUTDOOR MATERNITY CLINIC

ALSO A PLAN BY WHICH INFANT MORTALITY MAY BE REDUCED IN LARGE CITIES *

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The outdoor maternity service mentioned in the title of this paper is one conducted by Dr. I. L. Hill in New York City for the past nine years. By means of graduates and undergraduates who desire experience in obstetrics, six to seven hundred women are treated during childbirth in their tenement homes in the course of a year. In November, 1908, I organized a pediatric department to this outdoor maternity service, a novelty in this country.

As soon as the mother applies for aid a social worker calls at her home and obtains on a special card exact data concerning the age, nationalities of parents, previous pregnancies, premature deliveries, miscarriages, causes of death of these children, parents' occupation, total earnings of family, rent paid per month, housing conditions, number of people per room, boarders, cleanliness, amount of food, knowledge of infant hygiene, general intelligence, willingness to cooperate, mother's general condition, etc. Should these notes show that the woman required medical care, this is obtained for her. If other conditions are present, she is referred to the various charities, so as to put her in the best possible condition for the child birth.

As soon as the child is born a trained nurse is sent to the house and instructs the mother in the principles of infant hygiene. The child is seen every day until it is taking the breast properly. The nurses are impressed with this, for it is our aim to supply that link in the chain which is missing in other institutions that we know of, namely, to get the care of the child before its birth and from its birth, to be sure that it is nursing well or to find the reason why it is not.

The first day the child is taken into the street it is brought to the clinic, and this clinic visit is repeated once a month until the child is a year old. We realize that this time limit is rather short, but we also know that the first half-year is the most important and needs absolute follow-up work. Every child is seen once a month somewhere, either on the street, in its home, or at the clinic. In order to do this the children are indexed as to names in a book where the months of the year are ruled off in perpendicular parallel columns. Each time a child is seen a mark is made opposite its name. At the end of the month every child must have had its present mark in evidence, or the parents are written to or called on. The only way we lose track of our cases in this great city is by being unable, in spite of all possible detective work, to find out the new address. Thus we have taken care of 784 children; 100 we have lost track of, and 38 have died. The average attendance at the clinic was 14; largest number, 40; attendance during the year, 2,042. During July, August and September, 1,872 house visits were made. The cost of this work, including rent, salaries of three nurses and one social worker, gas, telephone, etc., was $350 per month, or about $4,000 per year. Much interesting data as to infant mortality and sociologic conditions have been gathered during the progress of the work, which will be published elsewhere *in extenso*.

One of the main objects of this work is the propaganda of breast feeding, which, to our minds, is the most important element in the reduction of infant mortality. The changes in the sociologic conditions, which must not be underestimated, are but a means to this end. Statistics of breast feeding, both as to the number of children on the breast and the duration of this manner of feeding, are entirely lacking in America. There are many methods by which this information has been obtained more or less completely—by questioning physicians, midwives, at public vaccinations, in clinics, and in the census taking. The most reliable method is to follow each child individually and, as it becomes a bottle baby, put it in that class. The following is a table which we have been able to compile, showing the number and length of time our babies have been breast babies:

Number of Infants.	Time Observed Months.	Number on the Breast.	Percentage.
641	1	616	96
532	2	486	91.3
472	3	423	89.6
387	4	331	85.5
309	5	250	80.9
258	6	196	75.9
181	7	123	67.9
138	8	95	68.9
92	9	60	65

From this it will be seen that of our babies observed for five months 80 per cent. were on the breast, which is up to the critical period of their lives. One might here sound a warning to all charitable institutions, hospitals and dispensaries, that have to do with the distribution of and by the prevention of intermediary hemorrhages between the layers of the tissues. That, at least, is the only way by which we could explain the fact that, for instance, suprapubic prostatectomies practically healed up inside of three days in men varying in age from 70 to 83 years. Another advantage of this method is that, in accordance with the experience of Klapp and Hoerman, patients under this reduced circulation require smaller quantities of the anesthetic given and recuperate more quickly from the anesthesia.

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* Abstract of an address before the Section on Hygiene and Public Health of the Academy of Medicine, New York City, Dec. 14, 1909.

The disagreeable sensations produced by rubber constriction are entirely absent in this method, and any appreciable changes in the blood-pressure, as observed in Momburg's compression of the abdominal aorta, are not to be found. We want to recommend emphatically this simple and effective procedure to the attention of the profession. There is no doubt in our mind that this method can be used just as successfully in other surgical operations as in those mentioned above.

92 State Street.

Therapeutics

CREOSOTE IN PULMONARY TUBERCULOSIS

If one were to base an opinion on current medical literature, he must conclude that the use of drugs in the treatment of pulmonary tuberculosis had been practically abandoned, and that nourishing food and fresh air were adequate to cure most cases of the disease. It would be grossly unfair to the physicians of three or four decades ago to assume that the use of these latter remedial agencies was unknown or ignored by them. The value of food and fresh air is no new discovery, but has long been insisted on by sensible and practical physicians, though, of course, the general adoption of the plan of sleeping out-of-doors did not attain great popularity until comparatively recently, and perhaps has already experienced its most extensive practice.

Although the treatment of pulmonary tuberculosis in institutions is now a steadily growing fashion, it does not to-day seem probable that the multiplication of sanatoria will lead, at least in the present generation, to the entire abolition of tuberculosis from civilized communities, nor is it likely that the time will ever come when a very large proportion of tuberculous patients will be treated in sanatoria. On the other hand, it is extremely probable that the majority of these patients will continue to be treated in their own homes.

Consequently it becomes a question of great practical importance to every general practitioner to know whether any drugs can be expected to benefit his patient and assist and increase the improvement derived from food and pure air.

A number of drugs have been highly commended and extensively used with asserted benefit. Perhaps none has been more commended and used than creosote; but, rather curiously, there does not seem to be any general agreement as to its value or uselessness. Many physicians who are looked up to as authorities on the subject, among them heads of sanatoria, teachers and hospital attendants, ignore it entirely, some with a manner as though they had scarcely heard of such use of the drug. Others pass it on with slight mention, or enumerate it in a perfunctory way among the drugs which have been recommended.

On the other hand, not a few men do not hesitate to advise its use, and assert with the assurance of decided conviction that it is exceedingly beneficial in this disease; indeed, more beneficial than any other drug. Among its distinguished advocates is Dr. Beverley Robinson, of New York, who for more than twenty years has been using and praising the drug in tuberculosis of the respiratory organs. He asserts that he practically introduced the treatment in New York and read a paper on the subject before the Association of American Physicians over twenty years ago. Since then he has used the treatment continuously, and recently (*Medical Record*, Nov. 20, 1909) asserts: "I have written and spoken many times on this subject, and tried in every way to convince my colleagues that I was in dead earnest in regard to the doctrine preached. To-day I am thoroughly convinced that we have absolutely no medical treatment of pulmonary tuberculosis at all equal to the creosote treatment properly used and insisted on. In fact, I might say, without much fear of effective contradiction, that no other medical treatment up to date has any great value at all, except so far as temporary relief, perhaps, of symptoms is concerned. . . . By the combined, persistent, intelligent use of beechwood creosote internally and by inhalation, many patients may be saved who otherwise would die. In nearly all cases, no matter what the stage of the disease, much relief to symptoms may be obtained."

Robinson thinks that the best method of administering creosote internally is in the following combination:

℞.	Creosoti (beechwood, the best)	gtt. vi
	Glycerini	fl.℥i
	Spiritus frumenti	fl.℥ii

M. et Sig.: A desertspoonful every two, three or four hours, diluted with a little water.

Or this may be written as follows:

		Gm. or c.c.
℞.	Creosoti (beechwood, the best)	50
	Glycerini	25
	Spiritus frumenti, ad	100

M. et Sig.: A teaspoonful, in water, three times a day, after meals.

The dose of this may be increased to two or three teaspoonfuls, or, if it is desired to increase the creosote, the amount of it may be increased to 1 c.c. or more in the 100 c.c. mixture. If the whiskey is deemed inadvisable, elixir calisaya or the compound tincture of cardamon may be substituted.

For inhalation Robinson (*American Journal of the Medical Sciences*, August, 1908) recommends equal parts of creosote and alcohol, or, when there is much irritative cough, equal parts of beechwood creosote, alcohol and spirit of chloroform. Ten drops should be used on the sponge of a perforated zinc inhaler. The inhaler should be used frequently, at first for a few minutes, later gradually increasing the time until it is used from half an hour to an hour at a time, and finally it may be used almost continuously during the day, and frequently all night. "These inhalations modify sputum favorably, diminish its quantity, lessen cough, thus promoting rest, sleep and nutrition and general improvement physically, and in some instances appear to be the means through which the patient has gotten rid of tubercle bacilli permanently."

Such positive evidence by a man of Dr. Robinson's extensive clinical experience; extending, as regards the use of this particular drug, over twenty years, should carry greater weight than the negative testimony of a writer who has ignored the use of creosote because, perhaps, some favorite teacher has not recommended it.

Somewhat less enthusiastic testimony came to us, not so very long ago, from England. In a public lecture on

"The Evolution of the Treatment of Pulmonary Tuberculosis," delivered in connection with the sixth International Congress on Tuberculosis, at Horticultural Hall, Philadelphia, Sept. 24, 1908, and published in the special volume supplementary to the transactions of the Congress, Dr. C. Theodore Williams, of London, an eminent phthisiographer, says: "Creosote, and its derivative guaiacol, has been largely used in the treatment of consumption, principally by the French and Germans. Their reported successes led me to give both a trial, my chief experience relating to creosote.

"I tried this method largely according to various methods in tuberculous disease of the lungs. First, by inhalation of steam impregnated with creosote vapor. Patients lived and slept in rooms impregnated with this atmosphere.

"Secondly, dry creosote vapor, produced by heating it in an evaporating basin. Patients inhaled this vapor for from one-quarter to half an hour at a time, and this practice was continued for months.

"Thirdly, creosote was administered by the mouth in capsules, in doses of three to ten minims, three times a day, for weeks and months.

"Fourthly, creosote was mixed with olive oil, as recommended by Dr. Gimbert, of Cannes, in the proportion of 20 minims to half an ounce of olive oil, and injected subcutaneously. As much as a tablespoonful was injected at a time, and shortly afterward the patient used to taste the creosote in the mouth.

"The results of these experiments taught me that creosote has a wonderful influence in reducing catarrh and diminishing the amount of expectoration, but that it exercises no control over the evolution or spread of tubercles."

It has seemed worth while to present these remarks in full, not only on account of the position which Dr. Williams occupies as a trustworthy contributor to the literature of the subject of tuberculosis, but also because the entire lecture is printed in a volume of the very voluminous transactions of the congress, where, it is greatly to be feared, it will be overlooked by many who ought to read it.

In the present unsatisfactory and uncertain state of the treatment of pulmonary tuberculosis, the testimony of such distinguished clinicians that creosote affords considerable relief to many patients would seem to indicate, to put the matter most conservatively, that every practitioner who is treating a patient who has pulmonary tuberculosis should at least consider seriously the desirability of giving that patient the opportunity of obtaining any benefit, which in his particular case may be possible, from the use of creosote.

Now, just what is creosote expected to do to these tuberculous patients? The appetite should be increased, digestion stimulated, nutrition improved, weight added, expectoration diminished, the pus in the sputum lessened, the disagreeable odor from the sputum should disappear, and associated non-tuberculous laryngitis, tracheitis and bronchitis of the larger tubes should be cured. It can do all this when associated with fresh, clean air, good food, and rest.

What has driven creosote to the defensive is that so many results are no better than those from fresh, clean air, good food, and rest without creosote, and that so much harm has been done with creosote. The large doses advised and used so long are really inexcusable. Pushing creosote to the point of tolerance and then reducing it and again pushing it to the point of tolerance, until 10, 15, 20, 25, or even 30 drops, three times a day are taken and retained, is unjustifiable. The demand of the body from this nutrition stimulant for the organs to work overtime is bound to result, sooner or later, in a great loss to the body by the overworked organs going on strike. And this is just what occurs after too much creosote has been taken. The appetite is lost, the tongue becomes coated, nausea and vomiting occur, the liver acts sluggishly, there is a yellow tinge to the sclerotics, the pancreatic secretion is lessened, sugar or albumin may appear in the urine, serious kidney irritation and bladder irritation may develop, headaches occur, there is a loss of red corpuscles, there is a loss of weight, and the patient is where he began, as to nutrition, before he took the creosote.

Small doses of creosote may inhibit the growth of or kill the tubercle bacilli that are swallowed into the stomach (so will dilute hydrochloric acid in small doses) and will often increase the appetite and digestion, especially the pancreatic. It acts as a bowel antiseptic, and in small doses will not ordinarily injure the kidneys. Part of the creosote will be excreted by the lungs, and will inhibit the growth of secondary germs of infection (pus germs), and in so much certainty acts for good in pulmonary tuberculosis. The dose, however, that acts for good must be individualized, and is not large. The tongue and digestion should be watched, and the urine frequently examined for albumin during the administration of creosote, and any symptoms of overaction should cause it to be stopped.

Creosote is a phenol poison, and the symptoms of its poisonous action are those of phenol (carbolic acid): gastro-intestinal disturbance, circulatory depression, nervous depression, and kidney inflammation.

It seems probable, from all the testimony presented, that there are patients suffering from pulmonary tuberculosis who will do better on fresh clean air, good food, rest, and creosote than without the creosote. Whether creosote will be of advantage to a given patient must be determined by studying him while he is taking it. It is theoretically indicated if he expectorates a lot of yellow, bad smelling pus; in other words, has a secondary bronchitis or cavities. Albumin in the urine or persistent dyspepsia would contraindicate its use. It should not be forgotten that creosote is more or less absorbed when inhaled, and can thus irritate the kidneys.

Besides the combination for inhalation suggested by Robinson, the following formulas may be used:

℞,	c.c.		
Creosoti (beechwood, best)	1	or	m. xv.
Tincturæ benzoini comp.	100		fl.℥iii

M. et Sig.: To inhale a teaspoonful, from boiling water, three or four times a day.
Shake.

Or:

℞,	c.c.		
Creosoti (beechwood, best)	50		m. vii
Olei pini silvestris	10	or	fl.ʒiiss
Tincturæ benzoini comp., ad	100		ad, fl.℥iii

M. et Sig.: To inhale a teaspoonful, from boiling water, three or four times a day.
Shake.

Or:

℞,	c.c.		
Creosoti (beechwood, best)	50		m. x
Olei pini silvestris	5	or	
Olei terebinthinæ	5		āā, fl.ʒiss
Tincturæ benzoini comp., ad	100		ad, fl.℥iv

M. et Sig.: To inhale a teaspoonful, from boiling water, three or four times a day.
Shake.

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[For other information see second page following reading matter]

SATURDAY, APRIL 16, 1910

THE INTRAVENOUS INJECTION OF ANTITOXIC SERUM

By serum therapy we aim to introduce into the body, in the most effective manner, specific antibodies and to maintain a high concentration so long as necessary.

The results of investigations as to the influence of the place of introduction on the time when the maximum concentration of antibodies in the blood in passive immunization is reached may be summarized to this effect: On intravenous injection the maximum concentration is reached at once, while on subcutaneous, intramuscular and intraperitoneal injection it is reached only after an interval variously stated at from twenty-four to forty-eight or seventy-two hours. In man, Henderson Smith[1] found absorption of diphtheria antitoxin from the subcutaneous tissue complete only after two or three days. In the case of certain agglutinins and of diphtheria antitoxin, the maximum concentration (according to Levin[2]) in the blood in animals is reached in about three days after subcutaneous and intramuscular injections, but during the first twenty-four hours the absorption is greater from the muscles than from the subcutaneous tissues—at the end of ten hours it is fourteen times greater.

Levin also found that the introduction in animals of immune serum, no matter whether from the same or different species and whether by intravenous, intramuscular or subcutaneous injection, appears to be followed by an immediate and marked loss in antibodies for which he could offer no explanation. That is to say, the demonstrable content of antibody in the serum of the animal in all cases falls far short of the amount calculated on the basis that the antibodies are simply diluted in the blood. This deficit in his experiments was greatest when the antiserum was introduced subcutaneously, less when introduced intramuscularly and least when introduced intravenously, but even here it amounted to from 40 to 60 per cent. and in some cases more.

The fact that intravenous injection immediately gives a far greater concentration of antitoxin and other antibodies in the blood, and hence in the lymph also, thus reaching all parts, than is ever attained by the gradual absorption from the subcutaneous tissue is a strong point in favor of the direct injection into the blood of antidiphtheritic serum in severe and urgent cases. This is urged by Behring, Madsen and others. The principle is, of course, equally applicable to other conditions. According to Berghaus,[3] the curative value of antidiphtheritic serum for guinea-pigs on direct injection into the blood is 500 times greater than on subcutaneous injection and from 60 to 90 times greater than on intraperitoneal injection. Schreiber[4] and Berlin[5] injected antidiphtheritic serum intravenously in a number of cases. They state that general improvement follows sooner than on subcutaneous injection, while the local process in the throat follows about the same course in both cases. And that in very severe cases and in cases coming under treatment late in the disease the intravenous injection of large doses may offer the only chance. In their series no dangerous symptoms developed. Fette[6] injected 145 patients intravenously and believes that the lives of several desperately ill patients were saved by so doing. According to Park,[7] large doses of antitetanic serum injected intravenously within a few hours of the onset of the symptoms of tetanus have given good results.

In case of difficulty in entering the vein in suitable cases, it is advised that the injections be made into the muscle of the buttock which, so far as concerns the rapidity and degree of absorption of antoxin into the blood, is a more favorable place for injection than the subcutaneous tissue.

The one objection of any consequence against the intravenous method is the increased danger of anaphylactic shock in susceptible persons. But in order still further to reduce the mortality from diphtheria this risk may well be taken in desperate cases. Says Ker:[8] "Occasionally I have seen an intravenous injection act almost like magic in an entirely hopeless case."

THE REVISION OF THE NATIONAL FORMULARY

The national Food and Drugs Act raised the National Formulary to the position of an official standard and gave it a significance and an importance which previously it could not claim. In order to meet the requirements of the new function of this book, the American Pharmaceutical Association, at its last meeting, invited the Section on Pharmacology and Therapeutics of the American Medical Association to cooperate in the revision and a committee of five members was appointed.

This idea of having the cooperation of physicians is a good one, for the National Formulary is a book in which physicians are becoming more and more interested since the propaganda against nostrums was initiated. A thorough study of the book is now necessary in order to adapt it more closely to our present knowledge and to eliminate certain features that are not a credit to it. When some of the formulas were selected there was not sufficient investigation made to show whether or not they were of therapeutic value; and in others there was evident disregard of chemical and other incompatibility. Thus, in liquor antisepticus alkalinus, small amounts of reputed antiseptic drugs satisfied the implied demand for an antiseptic solution, and no investigation was made to determine whether or not the strength was sufficient for antiseptic or germicidal results. In a similar manner, because acids were found to be necessary to the digestive action of pepsin, a little acid (not sufficient for any therapeutic purpose) was added to a popular digestive powder. The same thing was done with the compound elixirs; and thus was perpetrated the absurdity of combining pepsin and pancreatin in an acid solution, an incompatibility that we fully demonstrated three years ago.[1] But it is asserted that the use of elixir digestivum compositum (N. F.) and proprietary elixirs of similar composition as a vehicle in the administration of salicylates, bismuth salts, bromids, etc., is actually on the increase. It hardly seems possible that this can be true, that a physician should continue to use something supposed to be a digestive when all he needs is a suitable elixir. But there is no doubt that the demand for these elixirs and for the proprietaries of which the elixir digestivum compositum is an imitation is to a great extent a demand for a vehicle. The Pharmacopeia already contains two highly alcoholic elixirs which serve as vehicles, elixir adjuvans and elixir aromaticum, so that it would seem unnecessary to add still another more or less similar preparation. If, however, it is deemed desirable to have a colored vehicle, one could be made by omitting the digestives from the elixir digestivum compositum and giving it a name to signify its use as a vehicle.

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[1] Jour. Hyg., 1907, vii, 205.
[2] Ztschr. f. Immunitätsf. u. exp. Therapie, 1909, i, 3.
[3] Centralbl. f. Bakt., I, 1909, l, 87; Also experiments of F. Meyer, Berl. klin. Wchnschr., 1909, xlvi, 1202.
[4] München. med. Wchnschr., 1909, xxxv, 1597.
[5] Deutsch. med. Wchnschr., 1910, xxxvi, 210.
[6] Med. Klin., 1909, v, 1891.
[7] THE JOURNAL, Jan. 22, 1910, p. 254.
[8] Infectious Diseases, 1909.

The medical men who have been selected to advise the committee on revision on the question of the character of the formulas to be included in the book are supposed to be chosen for their knowledge, not of pharmacy, but of therapeutic possibilities. It is evident, therefore, that therapeutics is to be guarded as well as pharmacy in this revision.

It has been suggested that all complex formulas and mixtures should be left out of the Pharmacopeia. The suggestion may be a good one. All such formulas found pharmaceutically correct and therapeutically efficient might then be included in the National Formulary. There should be added also the formula of a simple vehicle as suggested above; and there might be included formulas for mouth-washes or throat-washes, external applications such as liniments, pastes, ointments and counter-irritants, and perhaps injections of various sorts. These could be given by way of suggestion as to strengths that might be employed and as to pharmaceutical elegance and suitability rather than as set formulas to be used for all patients without variation. The book, however, should not mislead any physician by containing preparations that are worthless therapeutically or chemically impossible. It should be kept in mind that the use of set formulas in prescribing is not scientific, and the aim should always be to prescribe single drugs or simple combinations directly adapted to the case in hand. Until that method is followed by physicians universally, however, some of the present formulas now included in the Formulary will perhaps have to be retained.

CARCINOMA OF THE TONGUE

Much of the recent discussion concerning the increase of cancer is confined to statistics relative to cancer of the uterus, breast and stomach. It is pertinent, therefore, to call attention to a form of carcinoma of the epithelioid type (epithelioma) which is quite as fatal as any other.

Of the epithelioid type, carcinoma of the tongue is much more frequent than is commonly supposed. Andrew of Glasgow presents some very surprising statistics relative to epithelioma of the tongue. Of 118 cases comprising various diseases of this organ, such as abscess, hematoma, glossitis, leucoplakia, papilloma, and tuberculous ulcer, 98 were cancer of the epithelioid variety. Of the 98 patients, 88 were males and 10 were females. These figures are similar to those obtained for cancer of the lip. Andrew found that in 469 cases of epithelioma the order of frequency was: tongue, lower lip, esophagus, penis, cheek, larynx and tonsil. In other words, epithelioma of the tongue comprised 20.8 per cent. of all cases of epithelioma seen during a period of ten years. Of the 118 cases there was only one case of tongue syphilis, or 0.8 per cent. The tongue and floor of the mouth are very rich in blood vessels and this, combined with the constant muscular movements of the tongue, produces a quick extension of the cancerous process into the lymphatic and submental and submaxillary glands.

The entire statistics cited by Andrew cover the histories of over forty thousand cases of general diseases, and bear out the opinions of the rhinologists and stomatologists who naturally see cases of tongue disease more frequently than the average general practitioner.

It needs to be emphasized that tertiary syphilis is rare in the tongue—a fact which is by no means well known. Recently three cases were reported in which several physicians diagnosed gumma of the tongue, and the patients were given iodids in large doses. Each of these cases, when a section of the tongue was taken, proved to be epithelioma, and all were practically inoperable at the time the true diagnosis was made.

However, if the patient has had an initial syphilitic lesion it is necessary to be on guard, for Brandt of Berlin says that it is not uncommon to find carcinoma arising from the base of a syphilitic ulcer and Koerner of London has seen at least twelve undoubted cases in the tongue. These observations are somewhat discounted by the statement previously made relative to the infrequency of syphilitic tongue conditions, but the possibility should be kept in mind.

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[1] Liquid Combinations Containing Pepsin and Pancreatin, THE JOURNAL A. M. A., Feb. 2, 1907, xlviii, 434

A leukoplakia, a fissure or an ulcer of the tongue should not be temporized with, but a portion of the growth should be submitted early to microscopic examination. It need scarcely be stated that the cure of cancer anywhere in the body depends on early diagnosis and complete eradication. Anything short of this means that the patient is deprived of the only opportunity he has of preventing a speedy and fatal termination of his malady. It is well, therefore, to be constantly on guard as to all suspicious lesions of the tongue.

RECENT ACTIVITY FOR A SAFE CELEBRATION OF THE FOURTH OF JULY

Never before has there been so much fruitful effort toward the securing of a safe celebration of the Fourth of July as during the past few months. Action thus early in the year is well advised for two chief reasons: First, before dealers in fireworks have laid in their supplies, valid objections cannot be raised to prohibitive or restrictive ordinances, and such ordinances are more easily secured; second, ample time is needed to plan other forms of celebration. Hundreds of cities and towns throughout the country have passed or are being strongly urged to adopt restrictive or prohibitory ordinances against the use of fireworks. Various organizations are taking an active part in the work. One city council, that of Hamilton, Ohio, recently passed an ordinance prohibiting the sale of fireworks, which was objected to by dealers on the ground that having already laid in their stocks of fireworks the enforcement of the ordinance would result in serious financial loss to them; whereupon the people raised a fund, bought up all the fireworks and will hold an exhibition in the public park on July Fourth. Meanwhile the ordinance will be made effective. Equally interesting is the movement to substitute other forms of celebration, and many cities report plans for pageants, military parades, flag-drills, picnics, etc. One city has raised a fund of $60,000 for this year's celebration. That the larger cities are undertaking these safer and more sensible methods of celebration is especially encouraging, since it will be a stimulus to smaller cities to do likewise.

ANOTHER FRAUDULENT PRACTITIONER ELIMINATED

According to the *Texas State Journal of Medicine* "the greatest charlatan and quack that ever imposed on the credulity and gullibility of the Texas public" was put out of business in Judge Camp's court at San Antonio, March 4, when a jury brought in a verdict revoking the license of "Doctor" Lafayette Berry, the self-styled "Phenomenal." He had worked in many cities in Texas and had relieved many people of money by flagrant and fraudulent methods. He made a practice of touring the state with a company of performers and a brass band doing what he styled "bloodless surgery" on opera house stages and in public halls. Having been exonerated of fraudulent practices by minor courts several times, he became arrogant and bold in his denunciation of the medical profession. One of his strongholds was his apparent success with gall-stones. It is said that he used olive oil, followed by an alkali, and the resulting concretions of soap passed by the patient were claimed by him to be gall-stones. Our Texas exchange states that he secured $25 from Captain Moore, of the Beaumont fire department, by this plan. The matter was taken up by the profession of the city, the fraud exposed, the "Phenomenal" was brought into court and his license revoked as stated. On examination in court the "doctor" admitted that he had never graduated in medicine, but had secured a diploma from an Eclectic school in Philadelphia after two months' attendance and had obtained another from a school in San Francisco without any attendance. The profession of Texas and the *Texas State Journal of Medicine* deserve credit for their persistent and successful efforts to rid the state of this notorious quack.

Medical News

ARIZONA

Hospital Burned.—St. Mary's Hospital, Douglas, was burned February 10, with a loss of about $5,000. The patients were removed without casualty.

Society Meeting.—At the annual meeting of the Pima County Medical Society, *held in* Tucson, Dr. Ira E. Huffman was elected president; Dr. Abram Morrison, vice-president, and Dr. A. Garfield Schnabel, secretary-treasurer, all of Tucson.

Convicted of Violating Health Law.—A jury in Phoenix is said to have found Dr. Benjamin B. Moeur, *Tempe, guilty of* a misdemeanor in failing to report to the Maricopa county board of health, a case of smallpox in that city, and a fine of $20 was imposed. Dr. Henry A. Hughes, superintendent of the count yboard of health, was the *complaining witness in the* case. The defendant's attorney gave notice of his intention to appeal to the district court.

ARKANSAS

Fortune for Sanitarium.—By the will of A. W. Shirey, Mintern, who was assassinated March 8, $200,000 is left to the Grand Lodge of Odd Fellows to establish a sanitarium at Hot Springs.

District Society Meeting.—The semi-annual meeting of the Tenth Councilor District Medical Society was held in Fort Smith, March 15. Dr. Thomas Douglas, *Ozark*, was elected president; Dr. James J. Smith, Paris, vice-president; Dr. Othello M. Bourland, Van Buren, treasurer, and Dr. Dred R. Dorente, Fort Smith, secretary (reelected).

Medical Society Organized.—Montgomery County Medical Society was organized at Womble, March 22, with the following officers: President and delegate to the state society, Dr. Leroy S. Kennedy, Mount Ida; vice-president, Dr. John E. Alford, Womble; secretary, Dr. John H. McLean, Caddogan; corresponding secretary, Dr. John B. Stewart, Black Springs; and treasurer, Dr. Isaac N. Freeman, Washita.

CALIFORNIA

State Society Annual Meeting Planned.—The Medical Society of California will hold its annual meeting at Sacramento, April 19-21.

Decides Against Appellant.—The court of appeals, on March 16, is said to have affirmed the sentence of five years in the state prison imposed on Dr. Benjamin B. Lee, San *Francisco*, for manslaughter.

Plead for Benefactor.—Eight lepers of the colony at the San Francisco Isolation Hospital have joined in a petition to the San Francisco Board of Supervisors, asking that the board of health rescind its action in removing Dr. John Atcherly from attendance on them.

Antituberculosis Society Meeting.—At the first annual meeting of Alameda County Society for the Study and Prevention of Tuberculosis, March 25, Kenneth A. Millican was reelected president; Dr. Edward von Adelung, Oakland, first vice-president; Dr. Charles A. Dukes, Oakland, a member of the executive committee, and Drs. Nelson H. Chamberlain, Oakland, Edward N. Ewer, Oakland, Alexander S. Kelly, Oakland, Florence M. Sylvester, Oakland, F. M. Simpson, and Samuel J. Wells, Pleasanton, members of the board of directors; Dr. Ergo J. Majors, Oakland, chairman of the hospital committee; Dr. A. A. Alexander, Oakland, chairman of committee on public education and hygiene; Dr. Florence M. Sylvester, Oakland, chairman of the open air school committee; Dr. Walter S. Rutherford, Oakland, chairman of the membership committee; Dr. Edward N. Ewer, Oakland, chairman of public service committee, and Dr. Edward von Adelung, Oakland, chairman of clinic committee.

COLORADO

Site for Tuberculosis Sanatorium Bought.—By the purchase of fifteen acres near the southeastern limits of Denver, the Sisters of St. Francis have inaugurated a movement for the erection of a tuberculosis sanatorium to be known as St. Leo's Memorial Hospital, to cost $250,000.

Personal.—Dr. William S. Osborn, assistant superintendent of the Colorado State Insane Hospital, Pueblo, has been appointed chief of the Wisconsin State Receiving Hospital for the Insane, Mendota.——Dr. Jesse U. Sickenberger, Ouray, has been appointed surgeon of the Bureau of Pensions for the district of Ouray.

Faith Healers Convicted of Neglect.—In the Otero County Court, March 21, Judge E. W. McDaniel rendered his decision in the case of Mr. and Mrs. D. B. Messenger, La Junta, eddyists, charged with neglect in failing to call in a physician to attend three children after three other children had died. The decision holds the parents guilty of neglect.

Society Meetings.—The annual meeting of the Colorado Alumni Association of the Northwestern Medical School was held in Denver March 26. Dr. Alexander T. King, Pueblo, was elected president; Dr. Holmes, Pueblo, vice-president, and Dr. Karl F. Roehrig, Denver, secretary-treasurer. It was decided to hold the next annual meeting in Pueblo.——At the annual meeting of the Teller County Medical Society, held in Victor, March 29, the following officers were elected: Dr. John B. Polly, Victor, president; Drs. Albert C. McClanahan, Victor, and John A. Dunwody, Cripple Creek, vice-presidents; Dr. Thomas A. McIntyre, Cripple Creek, secretary-treasurer, and Dr. Albert C. McClanahan, delegate to the state medical society.

CONNECTICUT

Mental Hygienists Meet.—The board of directors of the Connecticut Society for Mental Hygiene, at its annual meeting in New Haven, elected the following physicians as officers: President, Dr. George Blumer, New Haven, and executive committee, Drs. Henry S. Noble, Middletown, Henry M. Pollock, Norwich, Whitefield N. Thompson, Hartford, and George H. Knight, Lakeville.

Malpractitioner Convicted.—Charles E. Harvey, Hartford, charged in the criminal superior court with performing a criminal operation, is said to have been found guilty and sentenced to imprisonment for not less than two nor more than three years in the state penitentiary, Wethersfield. It is stated that in 1905, on being found guilty of a similar offense, he was sentenced to one year in jail, expelled from the medical societies and his license to practice revoked.

GEORGIA

Personal.—Dr. William C. Lyle, Augusta, was recently elected secretary-treasurer of the Georgia Medical Association, and not Jarrett W. Palmer, Ailey, as was erroneously stated in THE JOURNAL of April 2.——Dr. Jesse G. McAfee has been appointed surgeon of the Southern Railway at Dalton, vice Dr. Charles P. Gordon, deceased.

District Society Meeting.—The Medical Society of the Ninth Congressional District held its annual meeting in Commerce, March 16. The plans of the Georgia State Tuberculosis Sanatorium, now being constructed at Alto, were presented by Dr. Jeff Davis, Toccoa, and a resolution was unanimously adopted that the state use its influence to have the general assembly apply the license tax on physicians of $10 per annum for the support of this institution. This will bring in about $25,000. The economic problem of tuberculosis and the fly as a carrier of infection were considered in papers presented by Dr. Lamartine G. Hardman, Commerce, who also gave a report of the Pellagra Conference. Dr. Jeff Davis, Toccoa, was elected president; Dr. Laetus Sanders, Commerce, vice-president, and Dr. A. D. White, Gainesville, secretary-treasurer.——The fifth semi-annual meeting of the Seventh District Medical Society of Georgia was held in Dalton, March 9, and the following officers were elected: Dr. Josephus J. P. Bowdoin, Adairsville, president; Dr. T. S. McLain, Calhouun, vice-president, and Dr. Harlan L. Erwin, secretary-treasurer (reelected), Dalton.

ILLINOIS

Sanatorium for Rock Island.—At the recent local election the municipal tuberculosis sanatorium tax levy was carried in Rock Island. This is the first city outside of Chicago to take advantage of the Glackin Sanatorium Tuberculosis Law.

Fire at Insane Hospital.—Fire [illegible] partially destroyed the store building of th[illegible] Hospital early in the morning of April 4. The 150 patients who were asleep on the third floor of the building were removed without casualty by the attendants.

Found Guilty of Murder.—After thirty-six hours' deliberation, the jury in the Sayler murder case at Watseka, on April 12, returned a verdict of guilty, sentencing Dr. W. H. Miller, Crescent City, to imprisonment for twelve years in the state penitentiary. Notice of appeal was filed.

Found Guilty.—Dr. Benjamin A. Arnold, Freeport, charged with committing a criminal assault while attending a young girl under 16 years of age, is said to have been found guilty, March 26, and sentenced to imprisonment for four years in the state penitentiary. A motion for a new trial was made.

New Interns for County Hospital.—As the results of the annual competitive examination, forty interns were selected for Cook County Hospital, each to serve for eighteen months. Of the successful candidates, 24 are graduates of Rush Medical College, and 8 each of Northwestern University Medical School and the College of Physicians and Surgeons.

Personal.—Dr. James A. Clyne, Joliet, who recently underwent an operation for appendicitis at St. Joseph's Hospital, is reported to be convalescent.——Dr. George P. Powell, Dixon, has been appointed a member of the local board of pension examining surgeons, vice Dr. David H. Law, deceased. ——Dr. Harry M. Hayes, Peoria, has returned from Europe.

Free Bed for Nurses.—A free bed for nurses afflicted with tuberculosis has recently been established at the Edward Sanatorium, Naperville, a department of the Chicago Tuberculosis Institute, in recognition of the valuable services of the nurses of Chicago, who as members of the Nurses' Auxiliary Committee of the Institute, took a leading part in the sale of Red-Cross Christmas stamps. From the proceeds of this sale, the money to support the bed has been appropriated.

Chicago

For a Contagious Hospital.—The Chicago Hospital Day Association has decided to set aside one-third of the money collected on Hospital Day, May 16, to a fund for the establishment of a contagious disease hospital, the need for which is urgent.

Personal.—Dr. Isadore S. Trostler was operated on in St. Joseph's Hospital, April 2, for a fracture of the right patella. ——Health Commissioner William A. Evans, Dr. William K. Murray and Dr. Egil T. Olsen have been appointed a board to pass on the medical and physical defects of 370 members of the police department who have attained the age of fifty years, and have been twenty years in the police service.

To and From Europe.—Dr. Julius H. Hess, accompanied by his family, sailed for Europe April 12. He will be abroad about four months and will inspect children's hospitals in Germany, Austria, France and England.——Dr. Charles Adams sailed for Europe April 9.——Dr. and Mrs. Franklin H. Martin have returned from Egypt and the Orient.——Dr. Frank W. Lynch has returned after a four months' trip abroad.——Dr. and Mrs. Jacob Frank have returned after a trip to Egypt, Palestine, Syria and Turkey.

KENTUCKY

Hospital Dedicated.—The new building of the Children's Free Hospital, Louisville, a model in every respect, was formally dedicated, April 2.

Appropriation Passed.—The governor has allowed the $30,000 annual appropriation for the State Board of Health to become a law without his signature, and he has signed the bill giving the King's Daughters Home for Incurables an appropriation of $10,000.

Hospital Commission Appointments.—The mayor of Louisville has appointed the following members of the Hospital Commission: Sam A. Culbertson, capitalist; Hon. Arthur Peter, former county judge; John H. Leathers, banker, and John Hubbuck, Sr., merchant. The recommendation of the Jefferson County Medical Society that a physician be appointed a member of the commission was not heeded.

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NEW YORK

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Plans for County Tuberculosis Hospital Approved.—The proposed tuberculosis hospital for Monroe county will be on the cottage plan following the suggestion of Dr. Eugene H. Porter, state health commissioner, that three or four cottages be built on the site selected. An administration building will be also erected to contain the offices of the institution and apartments for the officers. The hospital is to be built on the county farm site in West Brighton.

Release of Insane Prisoners.—The Attorney General has advised C. V. Collins, State Superintendent of Prisons, that a patient at the Dannemora State Hospital for the Criminal Insane, whose term of imprisonment has expired, but who continues to be insane, is not entitled to be paroled. If the condition of the patient is such that it is reasonably safe for him to be at large and he has friends or relatives willing to maintain him he may be discharged by the medical superintendent of the hospital.

New York City

Museum of Safety.—With the assistance of the Public Health Section of the New York Academy of Medicine, it is hoped to raise $5,000,000 as an endowment for the Museum of Safety. Dr. William H. Tolman is director of the proposed institution.

Personal.—Dr. Sidney D. Wilgus, chairman of the Board of Alienists of the New York Commission in Lunacy, has been appointed superintendent of the Eligin, Ill., State Hospital, vice Dr. Vaclav H. Podstata, resigned, and will assume charge of the institution May 1.

Dentists for Hospital.—It has been announced that a dentist and an assistant dentist will be appointed to Mount Sinai Hospital for the purpose of caring for the teeth of patients in the wards. Special care will thus be secured for the teeth of patients suffering from affections of the mouth, throat or digestive tract.

Mott Memorial Library Goes to Academy of Medicine.—The Mott Memorial Library, which was founded by the late Louise D. Mott as a memorial to her husband, Dr. Valentine C. Mott, the surgeon, is to be sold in an action for partition brought by a granddaughter of Dr. Mott. The property was bought as a permanent home for the medical books, surgical instruments and anatomic plates left by Dr. Mott. The New York Academy of Medicine will take these articles and mark them.

Endowments.—Among the recent endowments to the New York Polyclinic Medical School and Hospital are one of $250,000 from Mr. William P. Clyde and one of $125,000 from Mrs. Helen Hartley Jenkins.——The will of Mrs. Amelia Kaufman bequeathes $1,000 each to Mount Sinai Hospital, the Hebrew Benevolent and Orphan Asylum, the Montefiore Home for Chronic Invalids, the Home for Aged and Infirm Hebrews, the United Hebrew Charities and Beth Israel Hospital.

Crusade Against Venders of Wood Alcohol.—The Department of Health has begun a campaign against sellers of wood alcohol. Inspectors have visited many saloons and taken samples of liquors offered for sale for analysis. Of the first fifteen samples analyzed three contained wood alcohol. This step has been incited by the number of cases of blindness due to wood alcohol that have come to the notice of physicians and by the records of the coroner's office, which show a number of deaths each year attributed to wood alcohol.

NORTH CAROLINA

Alleged Violators of Prohibition Law Acquitted.—Dr. Millard F. Fox, Guilford College, president of the Guilford County Medical Society, who was on trial at Greensboro for alleged violation of the state prohibition law, was promptly acquitted.——Dr. Louis N. Burleyson, Greensboro, tried by the same court on the charge of having issued sixty-six prescriptions for whiskey during January, was also promptly acquitted. During the last few months several such prosecutions have been made at different places in the state, and in each instance the accused physician has been promptly acquitted.

OHIO

Doctors' Building for Canton.—A three-story brick and stone office building, containing twelve suites of rooms, to be used exclusively by physicians and dentists, will be erected by Dr. Charles A. Crane.

New Tuberculosis Hospitals.—The counties of Auglaize, Allen, Mercer, Van Wert and Shelby will join in the building of a tuberculosis hospital at Lima to cost $75,000.——The bonds have been sold by the county commissioners for the erection of the Franklin County Tuberculosis Hospital. The structure will be three stories in height, and will be built on the grounds of the Franklin County Infirmary.

Illegal Practitioners Found Guilty.—Nora Cook, Columbus, charged with malpractice, is said to have been found guilty, March 30, and sentenced to imprisonment for two years in the state penitentiary.——Three out of five persons arrested in Toledo the last week in March by the State Medical Board, on the charge of practicing medicine without legal authority, pleaded guilty and were fined $25 and costs each.

Injunction Wiped Out.—The recent decision of the Supreme Court in the Rose case, upholding the right of the State Board of Medical Registration and Examination to revoke certificates, wipes out a number of injunctions restraining the board from acting in eight cases, in which certificates of physicians charged with improper conduct had been revoked. These cases will be considered by the board at the April meeting.

Did Not Report Births and Deaths.—Dr. Joseph J. Boone, Mount Victory, is said to have been found guilty of refusing to return certificates of births and deaths as required by statute, and to have been fined $5 and costs. In his defense, Dr. Boone said he had meant to comply with the law, but had been unable to secure the information within the ten days required. The fine was suspended for sixty days pending an appeal to the higher court.

Society Meetings.—The Physicians' Business Men's League of Dayton, at its annual meeting March 29, elected the following officers: President, Dr. Claude N. Christman; vice-presidents, Drs. Charles E. Shawen and Webster S. Smith; secretary-treasurer, C. C. McClain, and censor, Dr. William H. Swisher.——The Ohio Alumni Association of Jefferson Medical College met for organization at Dayton, March 15. Dr. Alonzo H. Dunham, Dayton, was elected temporary chairman, and Drs. Fred Fletcher, Columbus, and Richard S. Gauger, Dayton, secretaries. It was decided to hold the first regular convention of the society in Toledo May 4-6.

PENNSYLVANIA

Schuylkill County's Bulletin.—The most recent addition to the group of the county medical society papers, is the Bulletin of the Schuylkill County Medical Society.

Additions to the State South Mountain Sanitarium.—The Department of Health announced, April 8, that sealed proposals would be received by the Commissioner of Health until April 29, for the furnishing of all labor and materials necessary for the construction of the following buildings of the Pennsylvania State South Mountain Sanitarium, Mont Alto, in accordance with the plans on file at Harrisburg: 15 cottages; pavilion; alterations and additions to infirmary; nurses' and physicians' dining buildings at camp and infirmary; children's and additions to laundry and alterations n dining building.

Philadelphia

Bequest.—The will of the late William D. Ziegler bequeathed $10,000 to the German Hospital for the establishment of two free beds in memory of the testator's parents, George J. Ziegler and Anna Barbara Ziegler.

Opportunities for Clinical Work.—Several vacancies exist in the throat, nose and ear outpatient service at the German Hospital, and these are open to young men desirous of becoming assistants. Applications should be made to the chief of clinic.

Hospital Addition.—Thomas Bradley, who had offered $25,000 for an addition to the Methodist Hospital, to be known as Bradley Hall, has increased his offer to $35,000. Work on the hall, which will contain the kitchen and offices of the hospital, thus making room in the main building for 50 more beds, will be started May 1.

Gifts to College of Physicians.—At the stated meeting of the College of Physicians, April 6, a marble bust of the late Dr. George B. Wood, the gift to the College by Messrs. Craige, Walter and J. Bartram Lippincott, was presented by Dr. Horatio C. Wood, Jr., and a marble bust of Dr. Horatio C. Wood, the gift of Mr. George Wood and Mr. George Wood Bacon of New York, was presented by Dr. James Tyson.

Progress in Medical Library.—It is announced that the Central Free Library will be the first of the city library system to establish a medical section, and all physicians having surplus medical books or journals are requested to send them to Mr. John Thomson, chief librarian. This is the work of the Philadelphia County Medical Society, which desires ultimately to have a medical section in all the free library branches in the city.

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WASHINGTON

Pure Drug Store as Well as Pure Drugs.—Members of Pierce County Medical Society are favoring druggists who do not distribute samples of dangerous drugs to residences.——The society has been an important factor in establishing drug stores devoted entirely to compounding prescriptions.

Hospital News.—The Catholic Sisters of Walla Walla have decided to erect a hospital to cost $150,000.——Improvements about to be undertaken at Fannie Paddack Hospital, Tacoma, are expected to cost $500,000, and when finished, the hospital will cover an entire block.——The Sacred Heart Hospital, Spokane, moved into its new building in the Manito Park district, March 24.——The King County Board has given orders for the erection of additional cottages at the County Hospital for Tuberculosis, Georgetown.——St. Joseph's Hospital, Tacoma, is to be enlarged at a cost of between $50,000 and $60,000. At present the institution has accommodation of about 90 patients.

GENERAL NEWS AND COMMENT

Hospital to be Moved.—During the month of May, the State Hospital, Puebla, Mexico, will be moved from its present location to its new quarters on the old Rancho Noriatenco.

Annual Meeting of Society.—At the annual meeting of the Manila Medical Society, held January 3, the following officers were elected: President, Dr. Vernon L. Andrews; vice-president, Dr. Philip K. Gilman; secretary-treasurer, Dr. Arthur F. Coca, and councilor, Dr. Edward R. Stitt.

Care of the Exceptional Child.—The National Association for the Study and Education of Exceptional Children will meet in New York City April 21 and 22. The topics for discussion at the various sessions are "Recognition of the Problem of the Exceptional Child;" "Phases of Exceptional Development," and "The Perspective in the Problem of the Exceptional Child."

The Permanent Committee for the International Medical Congresses.—This committee, organized at the last international medical congress at Budapest, now has headquarters at the Hague. Professor Pavy of London is chairman, and Professor Wenckebach of Groningen is secretary. Most of the nations have already appointed their representatives on the committee.

Students of Epilepsy.—The National Association for the Study of Epilepsy will hold its annual meeting in Osler Hall, Baltimore, May 7, under the auspices of the Maryland Psychiatric Society. The purpose of the association is to awaken the interest of the profession and the public in the treatment of epilepsy, and especially to induce the state to establish a colony similar to those of other states, and especially Virginia, which has received an appropriation of $100,000 for this purpose.

Work of the Health Education League.—Pamphlets 17 to 21 of the "Health Education Series," published by the Health Education League, Boston, have been received. They comprise such subjects as health in labor camps, tuberculosis, when to call a physician, habits of health, and wastes and their disposal. These pamphlets are written in the same sensible, popular style as those formerly issued, and contain much useful information and sound advice in matters of health and sanitation. They should have wide circulation, and the league should be encouraged in its work.

Personal.—Drs. G. Betton Massey, Philadelphia, and Fred H. Morse, Boston, are delegates from America to the International Congress of Physiotherapeutics, to be opened at the Sorbonne, Paris, March 29.——Dr. Charles W. Stiles, chief of the division of zoology of the United State Public Health and Marine-Hospital Service, and head of the Rockefeller Commission for the Eradication of Hookworm, has decided to make Raleigh, N. C., his permanent headquarters during his investigation.——Dr. Helen I. McGillicuddy has been appointed secretary of the Canal Zone Committee on Public Health and Preventive Medicine.

Tuberculosis Sunday.—April 24 has been set aside by the National Association for the Study and Prevention of Tuberculosis as the day on which the subject of tuberculosis is to be presented in churches in all parts of the United States. Clergymen of every denomination have been asked to cooperate, and in New York State in more than sixty cities and towns, they will preach on "No Uncared-for Tuberculosis in 1915." Labor unions in every large city are to be asked to attend church in a body on this day or to have the subject of tuberculosis brought up at their regular Sunday meeting.

Training of Attendants for Insane Hospitals.—One of the most important purposes of the Chicago School of Civics and Philanthropy, as stated in the announcement of summer courses, is to provide training for attendants in institutions for the insane. The first session of a summer school for this purpose was held from July 7 to August 7, 1908; the second session from June 28 to July 30, 1909, and the third will be held from June 21 to July 29, 1910. As the care of the insane is the most important institutional work carried on by the various states, this training course should be instrumental in securing better care for these unfortunates.

Missouri Valley Meeting.—The semi-annual meeting of the Medical Society of the Missouri Valley was held in Omaha, March 17 and 18. Dr. Frank P. Norbury, Hospital, Ill., delivered the address in medicine on "The Physical Basis of Mental Disease," and the address in surgery by Dr. Leonard Freeman, Denver, was on "Local Anesthesia." The society adopted resolutions setting forth that, as this is the day of specialized technical training among all lines of scientific care for the defective, dependent and delinquent classes of society, it commends the passage of such civil-service reform laws as shall demand the merit system of appointment and retention in all public institutions for the above classes, and deprecates the relegation of such appointments to the political spoils system.

Von Eiselsberg of Vienna Visits America.—Prof. Anton Freiherr von Eiselsberg, accompanied by his wife, arrived in Baltimore a few days ago, where he visited his brother-in-law, Prof. Clement von Pirquet. On Thursday evening, April 14, he was the guest of the Chicago Surgical Society at a dinner given at the University Club. Prof. von Eiselsberg will also visit St. Paul and other cities which are regarded as centers of surgery. Prof. von Eiselsberg was president of the German Surgical Association in 1908. In 1904 he declined a call to Berlin, preferring to remain in his native country, Austria, although before he was called to the chair of surgery at Vienna he had held similar chairs at Utrecht and Königsberg. His contributions to surgical literature have been numerous and important.

Officers of School Hygienists.—At the annual meeting of the American School Hygiene Association, held in Indianapolis, March 2-4, the following officers were elected: Honorary presidents, Drs. Arthur T. Cabot and Henry P. Walcott, Boston, and Dr. John H. Musser, Philadelphia; president, Dr. Luther H. Gulick, New York City; vice-president, Dr. Robert W. Lovett, Boston; secretary-treasurer, Dr. Thomas A. Story, New York City, and councilors, Drs. John J. Cronin and Abraham Jacobi, New York City; Philip King Brown, San Francisco; Walter E. Fernald, Waverly, Mass.; Henry M. Bracken, Minneapolis; J. H. McCurdy; Charles O. Probst, Columbus, Ohio; Frederick Forchheimer, Cincinnati; Washington E. Fischel, St. Louis; George Meylan, New York City, and William H. Welch, Baltimore; and Fletcher B. Dresslar, Ph.D., Alabama; Elmer E. Brown, Ph.D.; William Henry Burnham, Ph.D.; Thomas M. Balliet, Ph.D., New York City; Joseph Lee, LL.D., Boston; Calvin N. Kendall, A.M., Indianapolis; George H. Martin, LL.D., Massachusetts; Edward L. Stevens, L.H.D., New York City; J. J. Storrow, Boston; Edwin O. Jordan, Chicago; L. N. Hines, A.B., B.M., Crawfordsville, Ind.; Willard S. Small, Ph.D., Washington, D. C., Clark W. Hetherington, Ph.D., Missouri, and the officers of the association.

CANADA

New Home for Academy.—The trustees of the Academy of Medicine, Toronto, who wish to spend $30,000 in erecting a large stack-house and new assembly rooms, have failed to secure the necessary right from the university authorities, on whose land they are domiciled, so will be given new quarters on university property.

Hospital News.—The misunderstanding between the governors of the Regina General Hospital and the medical practitioners is said to be adjusted. Hereafter no medical man will be on the board of governors, but there will be an advisory medical board of three practitioners, elected by the medical staff of the hospital.——Arcola, Sask., is to have a new hospital.——Regina, Sask., will erect a new Isolation Hospital.——Saskatoon, Sask., will erect an addition to the municipal hospital.

Personal.—Dr. Harvey Smith, Winnipeg, has returned from a trip to the Bahamas.——Dr. Charles J. Hastings, Toronto, Chairman of the Milk Commission of the Canadian Medical Association, is visiting Victoria, Vancouver and other western cities organizing local milk commissions.——Dr. E. A. McCullough, Toronto, has been appointed superintendent of the new Sanatorium for Tuberculosis, London, Ont.——Dr. Charles Sheard, for 18 years medical health officer of Toronto, has resigned and will devote himself to private practice.

LONDON LETTER

(From Our Regular Correspondent)

London, March 26, 1910.

Treatment of Syphilis by Injections

A new edition of Hutchinson's work on syphilis has appeared in which he again condemns the use of injections of insoluble preparations of mercury in the treatment of syphilis. He says that only a small part of the evil resulting from it is ever reported, and adds that in certain cases this method is followed because it is more profitable than prescribing mercury by the mouth.

Of the new organic preparations of arsenic—atoxyl, soamin, etc.—which have been much recommended of late, evidence is also accumulating that they are dangerous innovations. Sir Jonathan Hutchinson considers them liable to all the disadvantages of the older preparations of arsenic and without any advantages over them. "Laudatory notices," he says, "are written by those who have little knowledge of what Fowler's solution can do and who would be more profitably employed in studying the properties of old-established simpler drugs than in urging the claims of new ones. Why should the attention be wearied and the memory burdened with details as to soamin and atoxyl, when, after all, nothing is claimed which has not already been amply proved for liquor arsenicalis, and the probability is not disputed that, although efficacious, in comparison with mercury they are only second best?" Moreover, it is now proved that these preparations are dangerous to the eye, for they are liable to cause optic neuritis.

On this point some interesting disclosures have been made in the *British Medical Journal* by Mr. Ernest Lane, a surgeon of considerable experience in the treatment of syphilis, and they have led to the prompt discontinuance of these drugs in some of the London hospitals. In 1908, Mr. Lane reported a series of twelve cases of syphilis in which he had used arylarsonates. He regarded the treatment as very successful and advocated it until the middle of last year, when he had reason to regret that he ever used it. He gave a syphilitic patient 10 injections of orsudan in 10 gr. doses on alternate days. The patient then suddenly became blind and was found to be suffering from double optic atrophy. Mr. Lane therefore at once abandoned the treatment. A second case has recently come under his notice in which a patient became blind after a course of 15 injections of soamin in 5 gr. doses. In a third case, an elderly patient was given a course of injections of soamin for sciatica and after 60 gr. had been administered met with the same fate. In a fourth case, a patient suffering from lymphadenoma was treated with soamin and became totally blind. Mr. Lane concludes with a serious criticism of the well-known firm of Burroughs, Wellcome & Co. In a pamphlet commending these arsenical preparations they reproduce, among others, the cases Mr. Lane orginally described. They only casually mention the fact that signs of intolerance, such as visual disturbances, nausea, vomiting, etc., have been encountered after soamin and should be a signal for withholding the drug. This is the only warning note, though they were informed by Mr. Lane of one case of total and irremediable blindness after the use of orsudan and knew that he had abandoned the treatment.

The injection method of treating syphilis has never been so popular in Great Britain as on the Continent of Europe; in Great Britain it is little used by the general practitioner. Many deaths from poisoning have been reported after the injection of insoluble preparations. In France, Professor Gaucher has reported ten deaths from injection of the favorite French preparation—grey oil.

[The experience of Mr. Lane is referred to in an article in Pharmacology in this issue.—Ed.]

The Cambridge Hospital for Special Diseases

A new departure in hospitals was inaugurated four years ago by a Committee for the Study of Special Diseases consisting of some of the most eminent members of the profession—Sir Jonathan Hutchinson, Sir Clifford Allbutt, Professor Osler, and others. The object was to study certain diseases which in consequence of their chronic character and uneventful course receive little attention from clinicians and pathologists. The patients are, as a rule, refused admission to hospitals because they would encumber the beds which can be more profitably devoted to acute cases. A small hospital containing only four or five beds was founded at Cambridge for the purpose of the study of such diseases under the direction of Mr. Strangeways, lecturer on special pathology at the university. This little hospital is principally supported by subscriptions from members of the medical profession who also cooperate in the work by sending suitable cases. The work of investigation is of the most thorough-going scientific kind and bulletins describing it are published from time to time. At present, an investigation is proceeding on that most hopeless malady—rheumatoid arthritis. The patients have been selected from a large number sent by physicians throughout the country, and notes on over 1,000 cases of various forms of arthritis have been collated. The nature of the work done is shown by the last number of the bulletin. An elaborate study of the blood pressure in arthritic diseases is contributed by Dr. Lambert. Dr. James Lindsay discusses the relation of infective foci to rheumatoid arthritis and analyzes 172 cases. Of these 138 occurred in women, among whom no infective focus was found in 65, a vaginal discharge was present in 36, pyorrhea alveolaris in 19, otorrhea in 7, gastric ulcer in 5, the disease followed labor in 4, there was rhinorrhea in 1, and chronic lacunar tonsillitis in 1. Of 34 patients no infective focus was found in 19, there was gonorrhea in 10, otorrhea in 3, rhinorrhea in 1 and the disease followed furunculosis in 1. These figures show that in 52 per cent. of the females and 44 per cent. of the males an infective process preceded the disease and they indicate a causal connection. Mr. Strangeways has studied the conjunctival reaction to tuberculin in 340 cases of arthritic disease, clinically of a non-tuberculous kind, including rheumatoid arthritis, gout, chronic rheumatism, acute articular rheumatism, subacute rheumatism, gonorrheal rheumatism, Charcot's disease, osteitis deformans, and arthritis of doubtful nature. He found a positive reaction in 210 or 62 per cent. In six of these cases he was able to make a necropsy. In two cases in which the reaction was negative there were old tuberculous scars at the apex of one lung; in a third which gave a slight reaction, and in a fourth which gave a severe reaction old tuberculous scars were present but there was no evidence of active mischief; in a fifth which gave a severe reaction no sign of tubercle was found; and in a sixth which gave no reaction no evidence of tubercle was found. In view of the observations of others these results are regarded as "strange and disconcerting." Dr. H. Ackroyd gives some careful observations on purin metabolism in rheumatoid arthritis. He finds that acute or subacute attacks are sometimes accompanied by increased purin excretion.

The Annual Meeting of the British Medical Association

The next annual meeting of the British Medical Association will be held in July at the University of London and the adjacent buildings of the Imperial College of Science and Technology at South Kensington which will provide ample accommodation for the various sections. These buildings are in a portion of London largely devoted to science and art; close at hand is the Natural History Museum and the art galleries of the Victoria and Albert Museums. The annual exhibition will be arranged in the great hall in the west gallery of the university and in the galleries overlooking the reception room.

The Progress of Cremation

Cremation continues to make only slow progress in Great Britain. The number of cremations in 1909 was only 855, an advance of 60 on the previous year. The whole total since the opening of the first crematorium in 1885 to the end of 1909 is 8,121. The Cremation Society continues actively its propaganda work but the support it receives is almost confined to persons of advanced views of one kind and another, many of whom are eminent in science or the arts.

Death Under Anesthesia for Tooth Extraction Attributed to the Status Lymphaticus

The status lymphaticus has recently occupied a prominent position as a cause of death under anesthesia even in adults. In the latest case, a woman, aged 37, died when under a mixture of chloroform and ether given by the open method for tooth extraction. A curious fact was that a few weeks previously she had had 9 teeth extracted successfully under the same anesthetic given by the same administrator and took it well. On the second occasion she changed color when one root was extracted and all attempts to resuscitate her failed. The anesthetic had been administered five and one-half minutes. Artificial respiration was kept up for four hours because she showed signs of rallying. The necropsy showed enlargement of the lymphatic glands of the tongue and throat, and thymus gland weighing one and one-half ounces. At this age the organ of course should have been absent. There was also chronic Bright's disease.

PARIS LETTER

(From Our Regular Correspondent)

Paris, March 25, 1910.

Experimental Typhoid Fever

In the session of March 21 of the Academy of Sciences, Professor Metchnikoff made a communication on experimental typhoid fever. Up to the present, no one had succeeded in communicating typhoid fever to animals under conditions analogous to those under which man contracts this disease; that is to say, by ingestion of typhoid bacilli. M. Metchnikoff thought that the failure of the experiments made on this subject were due to the fact that the animals were fed pure cultures of the Eberth bacilli, while typhoid infection in man manifests itself after the absorption of dilutions of excreta charged with bacilli. He gave a chimpanzee food contaminated with a dilution of this kind and at the end of six days observed a disease presenting all the characteristics of typhoid fever. There will be hereafter, therefore, a means of learning whether the vaccines, the employment of which had been proposed for man, can prevent the disease, and if the serums prepared for typhoid fever are really efficacious.

Present Condition of the Medical Syndicates in France

The *Union des Syndicats médicaux de France* has recently celebrated the twenty-fifth anniversary of its foundation. These syndicates are organizations distinct from the medical societies which pursue a scientific end on the one hand, and from the provident societies for the aid of ill or aged colleagues or their families on the other. The medical syndicates are, according to the law, professional associations for the purposes of study and the defense of the interests of the profession. Thus they undertake to mediate in the conflicts which may arise between colleagues, to aid their members whenever the interests of the profession demand it, and to combat the illegal practice of medicine. Out of the 20,877 physicians now in France, 12,013 belong to the 212 syndicates, of which the most important is the Syndicate of the Physicians of the Seine, with 1,420 members. Out of the 212 syndicates, 154 are affiliated with the central organization, called the Union of the Medical Syndicates of France. The latter lends its material and moral support to the syndicates and federations. Thus, in case of legal prosecution undertaken by a local syndicate, the Union of the Syndicates, if the resources of the syndicate are insufficient, shares the expenses. Since, to render illegal practice of medicine amenable to the French law, it is necessary that it be habitual, prosecution is not easy and calls for many proofs. It is to remedy this difficulty and to study the means of suppression that the Union of the Medical Syndicates took the initiative in creating the office for the repression of the illegal practice of medicine, which advises and guides the syndicates. The union has likewise taken an active part in the campaign for the reform of medical studies.

Law in Regard to Period of Rest for Female Teachers During the Period of Childbirth

A law has just been promulgated giving leave of absence of two months with full pay, outside of sick leave, to female teachers, one month before and one month after childbirth. The teacher cannot resume her service until she has undergone medical examination and submitted a certificate stating that she is in condition to do so without injury to her health. In case she is not able to resume her work the leave is prolonged under the same conditions to a limit of two months.

A Straw Vote on the Concours de l'Agrégation

The Society of the Interns of the Hospitals of Paris has just published the results of a referendum which it held among its members on the subject of the *concours de l'agrégation*. The questions were the two following: 1. "Do you favor suppressing the *concours d'agrégation* and replacing it by free recruitment of professors (privat-docentism)?" 2. "Are you in favor of demanding postponement of the *concours d'agrégation* until after the nomination of a commission for the reform of medical studies by the minister of public instruction?"

Out of 130 voting, 103 voted "yes" and 19 "no" on the first question; and 111 voted "yes" and 19 "no" on the second question. It is true that of the 380 members of the *Société de l'Internat*, 250 members did not vote.

Life-Insurance Companies and Professional Secrecy

The *Comité médical des Bouches-du-Rhône* has resolved that its members shall not furnish life-insurance companies, either directly on their own demand, or indirectly on the demand of the beneficiaries of the policies, whether relatives or not of the deceased, any certificate indicating the nature of the disease to which one of their insured patients has succumbed and the circumstances under which he died, notwithstanding the clause of the policy which seems to authorize the demand and the delivery of this certificate.

The council of the organization has, moreover, passed a resolution that, according to an understanding among the great French medical associations, steps should be taken toward the suppression of the clause in life-insurance policies demanding, among the evidence to be produced after the death of the insured, a medical certificate on the nature and the duration of the disease having caused the death, this clause being incompatible with the obligation of professional secrecy.

The Gingeot Prize

This prize, amounting to 1,000 francs ($200) will be awarded by the Medical Society of the Hospitals of Paris, to the author of the best work on the subject of catarrhal icterus (pathogenesis, clinical features and therapeutics). Memoirs bearing on the whole or a part of the subject will be admitted to the contest. They should be deposited with the *Société médicale des hôpitaux de Paris* between October 15 and November 15, 1910.

Election of Two National Correspondents to the Academy of Medicine

In its session of March 22, the Academy of Medicine elected as national correspondents in the surgical section, Dr. Delagénière of Mans, and Dr. Monprofit, professor of clinical surgery at the Angers medical school. Dr. Delagénière is the acting president of the French Surgical Association. Both the new members are especially well-known for their works on abdominal surgery.

Infant Mortality and Industry

At the Academy of Medicine recently, Dr. Oui, professor of obstetrics and the hygiene of infancy at the college of medicine of Lille, and Dr. H. Paucot, head of the obstetrical clinic of the same college, made an interesting report on infant mortality in industrial centers and the dangers of depopulation to which modern industrial customs subject our country. In the industrial centers the working woman is inevitably compelled to give her child into mercenary hands. Around Lille the care of the children that the working-women are obliged to abandon has grown into a regular occupation. Dividing the children of an industrial region into three classes, Drs. Oui and Paucot have ascertained that the mortality is 24 per cent. among children brought up directly by their mothers, 43 per cent. among children cared for by other persons than the mothers at the parents' homes, and 78 per cent. for children put in charge of care-takers. It is easy to see what peril there is leaving to these substitutes the task of bringing up children; not to speak of their ignorance of the most elementary rules of hygiene and of cleanliness, these care-takers, in order to save themselves trouble, resort to dangerous means, such as the administration of infusions of poppy-heads to the infants.

Drs. Oui and Paucot believe that the most efficacious means of remedying this state of things would be to create in each factory and in each large workroom places to which the working woman would bring her child and leave it to be looked after while working; she would thus be able herself to give it the necessary attention from time to time during the day.

The Floods and Typhoid Fever

Fear has been expressed that the floods might be followed by an epidemic of typhoid fever. Facts have shown that this fear is somewhat exaggerated. In studying from this point of view the most important rises of the Seine in the course of the last half century, that is to say, those of 1872, 1876 and 1882, Dr. Jacques Bertillon, head of the statistical department of the city of Paris, has discovered that floods, instead of causing an outbreak of typhoid fever, have been, on the contrary, followed by a marked diminution. This time again the same phenomenon has been observed; from Feb. 20 to Feb. 26, 1910, 31 cases of typhoid fever, with 3 deaths, have been recorded in Paris; for the corresponding week of the five preceding years the average is 36 cases, with 6 deaths.

This apparently paradoxical diminution of morbidity may evidently be explained by the greater precautions taken by the population, especially in respect to alimentary hygiene. In fact, because of the floods most of the inhabitants of Paris have almost entirely ceased to use uncooked vegetables.

> concerning them should be correct and complete. Yet the very first one, under the name atoxyl, was brought to the attention of the physician with an incorrect statement even as to its composition. Professor Puckner, secretary of the Council on Pharmacy and Chemistry, seems to have been the first to discover the discrepancies between the manufacturer's statement and the truth. His results were soon confirmed by Ehrlich."
>
> "New names for old drugs are often introduced in a manner to lead the physician to suppose that a new drug is being introduced. For example, I recently received a circular on 'soamin' from a leading English firm. In this it is stated that 'the arylarsonate, "soamin," was first introduced at the end of 1907,' and there is nothing in the circular to indicate that the same substance had been introduced by another firm several years previously under the name 'atoxyl,' or that the compound itself had been made in 1863 by Béchamp. A little further on in this circular I read: 'The toxic symptoms noticed by continental physicians when using other arylarsonates have not been observed with soamin.' As a matter of fact, most of the toxic symptoms noticed by continental writers were due to the same substance but under a different name."

There are certain points of resemblance between this history and that of the blindness from wood alcohol which shocked the public a few years ago. Certain dealers in wood alcohol represented that their product was harmless on account of its purity and a number of manufacturers were persuaded to use it, with most disastrous consequences not only to many innocent parties who lost their lives or sight but to themselves. The medical profession is now in somewhat the position of these manufacturers: dealers in all sorts of new drugs are representing that their purified products are harmless and the consequences are too often similar to those described above.

The physician is learning (reluctantly and regretfully, for he likes to feel that the manufacturers who express so much solicitude for his success in practice are dealing with him perfectly frankly) that the only safe way is to be profoundly skeptical of the statements of those who have something to sell; unfortunately this skepticism is necessary in regard to the products of the "great manufacturing houses" and some of the German professors as well as in regard to many of the humbler proprietaries.

It is probably a utopian dream but we still hope that a time will come when the contributors to the materia medica will come from well endowed medical schools and hospitals.

Micajah's Medicated Uterine Wafers

To the Editor:—We have read with interest the report of your committee on pharmacology [Contribution from the Chemical Laboratory.—Ed.] recently published in The Journal, on the subject of Micajah's Medicated Uterine Wafers, and your comments thereon.

We are of the opinion that, in your laudable efforts to reform the practice of pharmacology, it is not your desire or intention to act other than justly and fairly, and therefore, with this belief, we submit the following statements for your consideration, with the hope that you will see fit to publish them.

1. We do not seek by word or deed the patronage of the laity, and what few sales are made to the public are not of our contriving, nor should we be held responsible for them, any more than is the manufacturer of quinin to be blamed for the universal use of that drug.

2. Our literature should not be considered extravagant, for it is for the most part made up of clinical reports received from physicians and based on the unsolicited testimonials in our possession from hundreds of practitioners, many of whom have used Micajah's Wafers in practice from five to twenty years and they are therefore as well grounded as are the clinical reports concerning any preparation.

3. In the past year we have endeavored to place our preparation on a higher ethical basis by stating in our advertisements what our wafers contain, and by eliminating whatever seems to us open to criticism.

4. That the ingredients of the preparation are "simple" is no reason for considering them valueless. H. A. Kelly, in his work on medical gynecology, page 266, recommends these ingredients in a variety of conditions. Bandler also made important recommendations bearing on this subject in his "Medical Gynecology," 1909 edition, page 472. We feel we have the right to recommend this preparation for these and similar conditions, especially when our statements are backed up by the clinical experience of numerous general practitioners.

5. That the owner of Micajah's Wafers holds stock in a corporate firm which manufactures proprietary medicines and toilet articles, advertised to the laity, should not militate for or against our right to market a meritorious preparation on strictly ethical lines to the medical profession, inasmuch as many of the largest drug houses cater to both the doctor and the proprietary interests, and several are actively engaged in exploiting so-called nostrums.

6. We enclose a recent advertisement which has been accepted after investigation of our methods by careful medical journals, and we now believe we are conducting our business in entire conformity with the best interests of the medical profession and we feel certain of the true merits of our article. Micajah & Company, Warren, Pa.

[Comment: This letter brings out still more strongly the points raised in the article which appeared in The Journal, March 26, 1910. Being unable to analyze motives we must perforce, accept Micajah & Co.'s statement that they "do not seek by word or deed the patronage of the laity." In the comments on the laboratory's report it was very explicitly stated that this nostrum was advertised only in medical journals and not directly to the public. Inasmuch, however, as the container in which this product comes has printed on it the various diseases in which the "wafers" are indicated, as, moreover, within the container there is a leaflet which describes in detail the use of the preparation in a list of pathologic states varying from "enlargement of the womb" to "gonorrhea in the male," and, finally, as the name "uterine wafers" would seem in itself to be a plain bid to the public, we still maintain that "one might imagine that it was put up absolutely for the layman."

The proposition that advertising matter should not be considered extravagant because it is largely "made up of clinical reports received from physicians" is an argument that is as old as the nostrum business itself—and as fallacious as it is old. Unfortunately, as our files show, the most extravagant statements made for proprietary products frequently emanate from men who legally are entitled to write M.D. after their name. Because a Buffalo physician details the marvelous results from the use of Micajah's Medicated Uterine Wafers in forty-three cases comprising no fewer than thirty-six pathologic conditions from "otitis media" to "injured toe," and from "bunion" to "ophthalmia neonatorum," does not exempt such "literature" from the charge of being not merely extravagant, but ridiculously so.

As Micajah & Co. say, because the ingredients of their preparation are simple is no reason for considering them valueless. On the contrary, if the "wafers" were truthfully exploited for what they are and what they will do, their very simplicity would be a virtue. But such has not been done. And therein lies the viciousness of nostrums. Simple mixtures of well-known drugs are foisted on the medical profession with no hint as to their composition and with claims made that are not only false, but would immediately be recognized as absurd, if their actual composition were known.

That a mixture of borax and alum may be of value in some of the simple ailments of the female genital tract can easily be granted. That relief might follow the use of suppositories made of these ingredients—especially when supplemented by an increased attention to simple cleanliness—can also be admitted. To say, however, that such medicaments will quickly and permanently cure gonorrhea, urethritis, endometritis, etc., is foolish, false and vicious.]

Additional List of Pharmacopeial Delegates

Dr. Murray Galt Motter, secretary, Washington, D. C., sends the following supplementary list of delegates to the Pharmacopeial Convention of 1910. Previous lists appeared in The Journal, February 26, page 719, and March 12, page 890. He states that these names are offered for publication "without prejudice," it being understood that such publication does not of necessity mean that these delegates will be received and seated by the convention, as their credentials have not as yet been passed on by the Committee on Credentials and Arrangements.

Attention is invited to a ruling of the Committee on Credentials and Arrangements, that it can "not recognize the right of any one individual to represent more than *one organization* or institution."

College of Physicians and Surgeons, San Francisco.—John H. Flint, P. A. Dubois, J. E. Barbat.

University of California, California College of Pharmacy, San Francisco.—Franklin Theodore Green, Albert Schneider.

Connecticut State Medical Society.—Charles C. Beach, Samuel M. Garlick, Charles J. Foote; alternates, Thomas F. Rockwell, John E. Loveland, Elias Pratt.

Indiana University School of Medicine, Indianapolis.—C. Richard Schaefer, John N. Hurty, A. D. Thorburn; alternates, Samuel E. Earp, Charles R. Sowder, A. C. Kimberlin.

Indiana Pharmaceutical Association.—Fred W. Meissner, Leo Eliel, J. R. Francis; alternates, William H. Rudder, O. L. Hackett, W. O. Gross.

University of Notre Dame, School of Pharmacy.—James A. Burns; alternates, William Maloney, Louis Kelley.

Bennett Medical College, Chicago.—Walter Franz von Zelinski, George Louis Secord, Richard Jay Lambert; alternate, W. F. Waugh.

Kansas Medical College, Topeka.—Elvenor A. Ernest.

Kentucky State Medical Association.—J. W. McCormack, Virgil E. Simpson, A. T. McCormack; alternates, William Bailey, H. K. Adamson, Archibald Dixon.

Medical and Chirurgical Faculty of Maryland.—John D. Blake, Elmer B. Freeman, C. Urban Smith.

College of Physicians and Surgeons, Baltimore.—John Ruhräh, S. J. Fort, Harvey G. Beck.

University of Maryland, School of Medicine, Baltimore.—Thomas E. Satterthwaite, John C. Hemmeter, Joseph E. Gichner; alternates, Charles W. Mitchell, Arthur M. Shipley, J. M. Craighill.

University of Maryland, Department of Pharmacy.—David M. R. Culbreth, Henry P. Hynson, Charles Caspari, Jr.; alternates, Daniel Base, H. A. Brown Dunning, Evander Frank Kelly.

University of Minnesota, College of Medicine and Surgery.—E. D. Brown, W. A. Jones, Burnside Foster; alternates, George D. Head, J. P. Sedgwick, Haldor Sneve.

St. Louis University, School of Medicine.—G. C. Crandall, Jacob Friedman, E. Marsh Williams.

Missouri Pharmaceutical Association.—William Mittelbach, Charles Gietner, H. M. Pettit; alternates, Francis Hemm, D. V. Whitney, Charles L. Wright.

Kansas City (Mo.) College of Pharmacy and Natural Sciences.—Charles H. Stocking, James H. Southwell, Ferd L. Crampton.

Kansas City (Mo.) College of Pharmacy.—J. M. Good, Charles E. Caspari, O. F. Claus; alternates, Francis Heuun, Solomon Boehm, William K. Ilhardt.

University of Nebraska, College of Medicine, Lincoln.—Rufus Ashley Lyman.

Columbia College, College of Physicians and Surgeons, of New York.—S. W. Lambert, C. A. Herter, W. A. Bastedo; alternates, W. J. Gies, W. R. Williams, C. C. Lieb.

New York Homeopathic Medical College and Flower Hospital.—Royal S. Copeland, Rudolph F. Rabe, Edward W. Runyon; alternates, Stuart Close, J. Wilford Allen, Spencer Carlton.

Syracuse University, College of Medicine.—William Dewey Alsever, Frank P. Knowlton, H. L. Taylor.

New Hampshire Medical Society.—Edward H. Currier, Charles D. Howard, C. H. Bowker.

North Carolina Pharmaceutical Association.—E. V. Zoeller, F. W. Hancock, W. H. Weaver; alternates, W. W. Horne, E. V. Howell, C. A. Rayson.

Western Reserve University, Medical Department, Cleveland.—John P. Sawyer, J. W. Kerr, Richard Dexter.

Cincinnati College of Pharmacy.—Charles T. P. Fennel, John C. Otis.

Oklahoma Pharmaceutical Association.—George E. McLaurine, F. M. Weaver, J. C. Johnson; alternates, Harry Mitchell, F. R. Giteau, H. D. Kinseley.

University of Pennsylvania, School of Medicine.—John Marshall, Alfred Stengel, David L. Edsall; alternates, E. T. Reichert, Joseph Sailer, George E. de Schweinitz.

Temple University, Pharmacy Department, Philadelphia.—H. Evert Kendig, Henry Fisher, John R. Minehart; alternates, H. H. Boom, James C. Attix.

Rhode Island Pharmaceutical Association.—Howard A. Pearce, A. W. Fenner, Jr., Frank A. Jackson; alternates, James E. Brennan, P. J. Gaskin, E. P. Anthony.

Vanderbilt University, Department of Pharmacy, Nashville.—E. A. Ruddiman, J. T. McGill, William R. White; alternates, Max Bloomstein, Hardee D. Neil, E. F. Trolinger.

University of Tennessee, School of Pharmacy.—Charles O. Hill.

University of Wisconsin, School of Pharmacy.—Edward Kremers, Arthur S. Loevenhart; alternates, Richard Fisher, Rollin H. Denniston.

RAILROAD RATES

Inquiry of the Trunk Line Association has developed the fact that a fare and three-fifth concession, on the certificate plan, offers no material advantages over the less troublesome mileage rates and excursion rates, which can always be obtained for trips to Washington.

Correspondence

Gutta-Percha Tissue in Surgery

To the Editor:—The article in The Journal, March 19, 1910, by Dr. Jacob Frank on "Gutta-Percha Tissue in Surgery," is very useful and suggestive. I venture to add a few points regarding this substance which seem to have escaped his notice.

Dr. Frank makes the epigrammatic distinction between rubber and gutta-percha that "though one is elastic the other is plastic." Yet I cannot find in his article any evidence that he has utilized the plastic qualities of this substance. These are developed by heat. Under warmth, layers and folds of gutta-percha tissue stick together and fuse into a nearly homogeneous mass—which *on cooling does not, like rubber, remain* sticky, but resumes its normal state of glossy stiffness.

For many years I have been availing myself of this quality of gutta-percha tissue. In its simpler forms it may be used to cause folds of tissue to adhere thus avoiding pins or sutures. It is never needful to sew gutta-percha tissue to itself or indeed to anything else, as is done in Dr. Frank's illustrations. Hot water applied by a swab of cotton—drawn along the line of union causes the surfaces instantly to adhere, and cold water will harden and set the junction immutably. This is useful in making cigarette drains, covering splints for discharging compound fractures, enclosing dry or moist dressings, etc.

The plastic qualities of gutta-percha find their neatest expression in use about the hand. Take, for example, a smashed infected finger from a factory accident—a dry dressing will result in spreading infection—clean it up the best you may—it will need a moist dressing. For years, I have applied this as follows: Envelope in gauze bandage wet in saturated boric acid solution. Apply two or threee thicknesses of gutta-percha over this; warm over a flame, but not too near it, whereon the gutta-percha will coalesce. Wind on another layer or two, warm as before. Smooth the dressing till it becomes a homogeneous mass, and cool under cold water faucet. The rest of the hand can be washed at any time without prejudice to this dressing.

The thicker the dressing is made the more of a splint it becomes. Compound fractures of fingers can be well treated by moist gauze covered by gutta-percha tissue thick enough to immobilize the fingers. Similarly, finger cots of any desired size and thickness can be improvised, and find a field of usefulness in treating onychia, paronychia and any infection of fingers or nails.

William S. Cheeseman, M.D., Auburn, N. Y.

No Yellow Fever in Philippines

To the Editor:—Dr. A. P. Goff, chief, San Lazaro Hospitals Division, of the Bureau of Health for the Philippine Islands, calls attention to the health report in The Journal, Jan. 8, 1910, page 148. He says:

"In this report Manila is credited with 11 cases of yellow fever from Oct. 30 to Nov. 6, 1909, and the provinces with 160 cases of the same disease. This is, of course, simply a mistake *in printing* [caused by a line of type being transposed.—Ed.]—the cases mentioned being cholera cases that occurred during period mentioned, but the islands have enough to contend against without any one getting it into his head that we have yellow fever here also."

I respectfully ask that the necessary corrections be made.

Victor G. Heiser, Director of Health.

Fracture of Thigh in the Newborn

To the Editor:—In The Journal, Jan. 8, 1910, p. 169, is a reference to a contribution on the treatment of fracture of the thigh in the new-born, by Dr. G. Zancarini, published in the *Münchener medizinische Wochenschrift*, Nov. 16, 1909, p. 2353.

In 1887 I practiced this method in the case of a fracture at the lesser trochanter in a child just born. There had been a breech presentation, and the accoucheur had fractured the thigh in making traction with the finger inserted in the flexure of the groin. The case was treated by flexion of the thigh on the abdomen, placing it in the identical position it had occupied *in utero*, enveloping the thigh and abdomen of the child in a complete investment of plaster of Paris. To this I arranged a valise handle so that the infant was carried, for the three weeks in which it remained under treatment, as one would carry a dress suit case, by the handle.

The method was entirely original with me, and was made public in the Transactions of the New York Surgical Society, and in the second edition (1890) of my work on surgery.

JOHN A. WYETH, New York.

Sugar and Rice as Transmitters of Cholera

To the Editor:—The letter in THE JOURNAL, March 26, regarding "The Late Dr. James Sykes and a Cholera Epidemic," was read with great interest by me. The trouble no doubt lay in the raw sugar, possibly brought from the Philippines or Java. I have known of cases where two hundred coolies died of cholera on the docks in Bangkok in one day, and you can easily see how bags of rice and of sugar could become contaminated by the discharges of those ill with cholera.

CHARLES S. BRADDOCK, JR., New York.
Late Chief Medical Inspector Royal Siamese Government.

President Welch, General Sternberg and the Yellow-Fever Commission

To the Editor:—In the all-too-generous appreciation of my work in the editorial in THE JOURNAL, April 9, it is intimated that my advice may have led to the creation of the Yellow-Fever Commission. As all that relates to the history and work of this commission is highly important, permit me to say that the credit for the creation of this commission belongs solely to General Sternberg, who had previously so completely exhausted the purely bacteriologic study of yellow fever that it was possible for the commission to follow the new direction which proved so fruitful in results.

WILLIAM H. WELCH, Baltimore.

The Importance of a Department of Health

To the Editor:—The present bright outlook for the early establishing of a national Department of Health should awaken the profession to active effort on behalf of Senator Owen's Bill 6049, and for the securing of efficient seconding of the movement in the House. It seems to me there should be no thought or talk of a subordinate bureau, for in no other work of the government is free and untrammeled action so essential.

In an article on "Medicine and the State," published in THE JOURNAL, Feb. 19, 1898, I urged the vital necessity of a government department, analogous to the National Health Service of Germany, the Directory of Public Hygiene of France, and the Government Health Board of England. The profession has been working for such a department for near a century; had it been established a dozen years ago what incalculable evil would have been averted in the one matter of the bubonic plague, as Senator Owen so forcibly points out![1]

Now that the public is being awakened let us bend every energy to securing a national sanitary organization with the needed power. The view you express that in case a department should seem to be out of our present reach we should work for a bureau as better than nothing seems to me to be at least questionable. To establish a bureau, besides causing harmful and troublesome jealousies, would be to put the department a long way in the future, and I believe Senator Owen is entirely correct in holding that a department with full powers "is absolutely essential in order to comply with the international (and interstate) sanitary obligations of the United States," and that "the health and the welfare of the world" demand its establishment.

C. H. PRESTON, Davenport, Iowa.

[COMMENT: The present prospects for a national Department of Health are in every way brighter than ever before. A large number of members of Congress, in both the Senate and the House, have expressed themselves favorably and some enthusiastically regarding the proposed legislation. The public, in every instance in which it has had an opportunity to express itself, is favorable. The public press with but few exceptions endorses the movement. What is now needed is to let Congress know in unmistakable terms that there is a widespread, intelligent and insistent popular demand for largely increased health activities in the form of a national department of health. It is especially advisable that every physician and every medical society take immediate steps to acquaint their senators and representatives with their views, and especially that every effort be made to secure as general an expression of public opinion as possible.—ED.]

Book Notices

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APPENDICITIS and Other Diseases of the Vermiform Appendix. By Howard A. Kelly, M.D. Cloth. Pp. 502, with illustrations. Price, $6. Philadelphia: J. B. Lippincott Co.

The volume before us is a condensed edition of the work on "The Appendix Vermiformis and its Diseases," by Drs. Howard A. Kelly and Elizabeth Hurdon, published in 1905. The preface of the present edition calls attention to the purpose of the authors of the earlier work to make it "a great storehouse of well-digested facts relative to the protean diseases of this little organ." In this they were successful. The present book is the result of an attempt on the part of its accomplished author to meet better "the daily needs of the great army of general surgeons throughout the country" by the preparation of "a compact résumé dwelling with especial care on the practical side of the subject." Although the present edition is smaller by over 300 pages than its predecessor, it remains a book of large bulk. As a volume for reference on the subject of the diseases of the appendix it is encyclopedic in character. The historical part of the work has been prepared with great thoroughness; hardly anything, having the slightest relation to the diseased appendix, has failed to receive consideration. The sections on pathology, clinical history and the differential diagnosis of appendicitis are complete. Our author's teaching on the indications for operation and in favor of early operation is surgically sound and in accordance with the best practice of to-day. Neoplasms and specific infections of the appendix are fully discussed, as is also the complication of pregnancy and gynecologic conditions by appendicitis. The final chapter of the book on the medicolegal aspects of appendicitis, disposes of the subject in a fair and judicial manner. The book is well written throughout, profusely and beautifully illustrated, and of the highest value for reference and study.

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[1] THE JOURNAL A. M. A., April 2, 1910, p. 1159.

Rotter's Typische Operationen. Kompendium der Chirurgischen Operationslehre. Mit besonderer Berücksichtigung der topographischen Anatomie, sowie der Bedürfnisse des praktischen u. Feldarztes. 8 Auflage. Pp. 362, with illustrations. Herausgegeben von Dr. Alfred Schönwerth, K. Bayr. Oberstabsarzt und Privatdozent für Chirurgie. Cloth. Munich: J. F. Lehmann's Verlag, 1909.

This is a small volume that can be put in an ordinary coat-pocket. The surgical anatomy involved in an operation is briefly referred to and then the operation clearly but briefly described. Very little, if anything, is said about the indications for or results of operations and usually but one method of doing an operation is described. The book therefore is not one for the advanced surgeon but for the student beginning in operative work.

The Quest. By Thomas A. Stoddard. Cloth. Pp. 167, with illustrations. Price, $1.50. New York: Cochrane Publishing Co., 1909.

This is the story of a beloved country doctor who meets with an injury, is accused of a terrible crime and disappears from the community in which he lived. The death-bed confession of the real criminal, and a long and successful quest to find a mysterious "city by a lake" in South America, involving many perilous adventures, result in clearing up the mystery and restoring the doctor, who was innocent of all blame, to his wife and family. The book contains the views of the author on ethics and religion. It is a story about a physician, written by a physician, and should be interesting to physicians.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arkansas: Regular; Little Rock, May 10-11. Sec., Dr. F. T. Murphy, Brinkley.

Florida: Eclectic; Tampa, May 2. Sec., Dr. Hiram J. Hampton, 1803 Florida Avenue.

Georgia: Regular; Augusta, May 2-3, Atlanta, May 4-7. Sec., Dr. I. H. Goss, 297 Hancock Avenue, Athens.

Louisiana: Regular: New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street. Homeopathic: New Orleans, May 2. Sec., Dr. Gayle Aiken, 1102 St. Charles Avenue.

Massachusetts: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.

Mississippi: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.

Nebraska; State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.

Nevada: Carson City, May 2. Sec., Dr. S. L. Lee.

New York: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

Tennessee: Memphis, Nashville and Knoxville, May 3-4. Sec., Dr. C. A. Abernathy, Pulaski.

College of Physicians and Surgeons Moves to Columbia University Campus

Recognizing the advantage of a closer contact of its medical school with the other departments of the university, Columbia University has taken advantage of recent donations by William K. Vanderbilt, George J. Gould, Frank A. Munsey and others to move its medical school from Fifty-ninth street to the university campus at Morningside Heights, where over three million dollars is to be expended for the new medical school.

For more than a century this college has been in the forefront in medical education in this country. It has furnished to the medical profession many famous practitioners and investigators; men of high ideals and of unselfish devotion to the public good. The entire medical profession as well as its thousands of alumni may well rejoice in the continued progress and rare good fortune of this century-old medical school.

The Public Service

Medical Department of the Army

Changes for the week ended April 9, 1910:

Walkup, Joseph O., 1st lieut., M. R. C., assignment to duty in the Philippines Division revoked.

Heterick, R. H., 1st lieut., M. R. C., left Fort Oglethorpe, Ga., with 11th Cavalry, for duty at Target Range, Catoosa Springs, Ga.

Northington, E. C., 1st lieut., M. R. C., left Fort McPherson, Ga., with 2nd Battalion, 17th Infantry, en route to U. S. Rifle Range, Waco, Tex., for duty.

DeLaney, M. A., capt., will proceed to Philadelphia, on official business pertaining to the Medical Department.

Hoff, John Van R., col., will proceed to certain posts in the Department of the East, for the purpose of making an inspection of the medical department and of the sanitary condition at these posts.

Stark, Alexander N., major, relieved from duty at Vancouver Barracks, Wash., and ordered to Fort Adams, R. I., for duty.

Wheate, J. M., 1st lieut., M. R. C., granted leave of absence for 3 months and 15 days.

Reno, William W., major, granted leave of absence for 1 month.

Howell, Walter O., 1st lieut., M. R. C., will proceed from Presidio of San Francisco, to Fort Miley, Cal., for temporary duty.

Freeman, Charles E., capt., will report to Capt. John W. Moore, 1st Cavalry, Presidio of San Francisco, for duty with and to accompany the troops to be stationed in the Yosemite National Park, Cal.

Scott, Minot E., dental surgeon, reported for temporary duty at Fort Stevens, Ore.

Rand, I. W., major, left Fort Hancock, N. J., for 7 days' leave of absence.

DeLoffre, Samuel M., capt., leave of absence extended 1 month and 9 days.

Crissinger, Jay W., capt., granted leave of absence for 3 months.

O'Connor, R. P., major, granted leave of absence for 2 months.

Clarke, Howard 1st lieut., M. R. C., recently appointed, will proceed to Fort Thomas, Ky., for duty.

Dawe, C. W., 1st lieut., M. R. C., relieved from Fort Thomas, Ky., and ordered to Plattsburg Barracks, N. Y., for duty.

Davis, Oscar F., 1st lieut., M. R. C., now on leave of absence, will proceed on May 1st to Fort Mackenzie, Wyo., for duty at that station.

Hollingsworth, R. M., dental surgeon, on arrival at San Francisco, will proceed to his home and on arrival report by telegraph to the Surgeon General of the Army, for annulment of contract.

Woodson, Robert S., major, retired from active service on account of disability incident thereto. He will proceed to his home.

Bratton, Thomas S., major, granted 3 months' leave of absence about July 1, 1910. Relieved from duty at Fort Des Moines, Iowa, at expiration of leave of absence, and ordered to proceed to Manila, P. I., for duty, about Oct. 5, 1910.

Medical Corps of the Navy

Changes for the week ended April 2, 1910:

Lovering, P. H., medical director, commissioned Medical Director from Feb. 5, 1910.

Butts, H., P. A. surgeon, commissioned Passed Assistant Surgeon from June 1, 1910.

Kite, I. W., surgeon, placed on the retired list from March 23, 1910. Detached from Navy Yard, Norfolk, Va., and ordered home.

Blackwood, N. J., surgeon, detached from the Navy Yard, Washington, D. C., and ordered to the Naval Hospital, New York.

Hibbett, C. T., medical inspector, detached from the Naval Recruiting Station, Baltimore, and ordered to the Navy Yard, Norfolk, Va.

Wieber, F. W. F., medical inspector, ordered to the Naval Recruiting Station, Baltimore.

Smith, G. T., surgeon, detached from the Naval Hospital, New York, and ordered to the Naval Station, Hawaii.

Johnson, T. [illegible] [illegible]on, detached from the Naval Medical School, [illegible] and ordered home; appointment revoked as Acti[illegible] April 2, 1910.

Munson, F. M., P. A. surgeon, detached from the *Chattanooga* and ordered to the *Monterey*.

Noble, D. H., asst.-surgeon, detached from the *Monterey* and ordered to the *Charleston*.

Kelley, H. L., asst.-surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to the *Cleveland*.

Public Health and Marine-Hospital Service

Changes for the week ended April 6, 1910:

Wertenbaker, C. P., surgeon, detailed to represent the Service [illegible] Charities, to be held in Charlottesville, [illegible]

[illegible] directed to attend the meeting of the [illegible] [illegible]ission, to be held in Milwaukee, Wis., April 1, 1910.

breech presentation, and the accoucheur had fractured the thigh in making traction with the finger inserted in the flexure of the groin. The case was treated by flexion of the thigh on the abdomen, placing it in the identical position it had occupied *in utero*, enveloping the thigh and abdomen of the child in a complete investment of plaster of Paris. To this I arranged a valise handle so that the infant was carried, for the three weeks in which it remained under treatment, as one would carry a dress suit case, by the handle.

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[1] THE JOURNAL A. M. A., April 2, 1910, p. 1159.

William A. Tichenor, M.D. Washington University, St. Louis, 1879; of Chicago; formerly superintendent of the Missouri State Hospital for the Insane, No. 3, Fulton; was found dead in a hotel in Chicago, April 8, from heart disease and narcotic poisoning, aged 50.

Charles Wells Whitcomb, M.D. Philadelphia Medical College; surgeon of the Fifteenth Missouri Volunteer Infantry during the Civil War; died at his home in Myrtle Creek, Ore., February 17, from hypostatic pneumonia, following fracture of the femur, aged 77.

S. Joseph Collins, M.D. University of Louisville, 1861; (license, Texas, years of practice, 1907); a surgeon in the Confederate service throughout the Civil War; died at his home in Lovelady, Texas, March 21, from cancer of the stomach, aged 74.

Jesse J. Wright, M.D. Pennsylvania Medical College, Gettysburg, 1859; a member of the Medical and Chirurgical Faculty of Maryland; formerly president of the Cecil County Medical Society; died at his home in Warwick, March 26, from pneumonia, aged 73.

George W. Newman, M.D. Washington University, St. Louis, 1858; of Mount Vernon, Mo.; died in St. Thomas Hospital, Marshalltown, Iowa, March 28, as the result of injuries received in a train wreck in Green Mountain, Iowa, a week before, aged 76.

Thomas D. Spencer, M.D. New York Homeopathic Medical College, New York City, 1878; of Rochester, N. Y.; formerly president and a member of the staff of the Rochester Homeopathic Hospital; died in that institution, March 31, aged 53.

Samuel S. Miller, M.D. Jefferson Medical College, 1876; of Stoyestown; one of the oldest practitioners of Somerset county, Pa.; died in the Memorial Hospital, Pittsburg, March 28, after an operation for hemorrhage of the bladder, aged 70.

William W. Coleman, M.D. University of Louisville, 1883; a member of the Kentucky State Medical Association; and of the board of health of Mount Washington, Ky.; died at his home in that place, April 1, from pneumonia, aged 54.

Frederick C. Windecker, M.D. Denver and Gross College of Medicine, Denver, 1905; for a time a member of the staff of the Phipps Sanatorium, Denver; died at his home in Little Falls, N. Y., March 24, from tuberculosis, aged 25.

Cornelius A. Covert, M.D. Western Reserve University, Cleveland, 1869; for half a century a practitioner of Greensburg, Ind.; died at his home in that place, March 29, from dilatation of the heart, aged 79.

George Runk, M.D. American Medical Missionary College, Chicago, 1906; of Alma, Neb.; died on a train near Chariton, Iowa, March 17, while en route to his home, from miliary tuberculosis, aged 31.

Jefferson Kinney, M.D. Medical College of Virginia, Richmond, 1888; a specialist on diseases of the eye, ear and throat, Roanoke, Va.; died at his home in that city, March 27, from nephritis, aged 41.

Charles T. Wall, M.D. Marion-Sims College of Medicine, St. Louis, 1899; surgeon of the Wall Sanitarium, Washington, Ind.; died at his home in Washington, March 28, from pneumonia, aged 33.

David Thomas Long, M.D. Eclectic Medical Institute, Cincinnati, 1882; for several years superintendent of the Baptist Hospital, Topeka, Kan.; died at his home in that city, March 20, aged 63.

Fred A. Brennan, M.D. McGill University, Montreal, 1902; a member of the Vermont State Medical Society; died at his home in Georgia Center, Vt., March 26, from heart disease, aged 35.

George John Robinson, M.D. Jefferson Medical College, 1882; a member of the Medical Society of the State of North Carolina; died at his home in Smithfield, N. C., March 30, aged 64.

Charles Monroe Carter, M.D. Kentucky School of Medicine, Louisville, 1861; a veteran of the Civil War; died at his home in Kansas City, Mo., March 26, from pneumonia, aged 70.

Joseph Warren Odell, M.D. Harvard Medical School, Boston, 1855; a surgeon in the Federal service during the Civil War; died at his home in Greenland, N. H., March 24, aged 79.

Joshua Baker Conaway (years of practice, W. Va.); for forty years a practitioner of Bristol, W. Va.; died at his home in Clarksburg, March 17, from nephritis, aged 76.

Philander B. Taylor, M.D. University of Michigan, Ann Arbor, 1885; a member of the Michigan State Medical Society; died at his home in Clio, March 30, aged 69.

John B. Woodward (license, Mich., years of practice, 1900); for forty-three years a practitioner of Michigan; died at his home in Ravenna, April 4, aged 63.

Albert Terry Bryan, M.D. Rush Medical College, Chicago, 1882; died at his home in Forest City, Iowa, March 28, from cancer of the kidney, aged 57.

Charles Louis King, M.D. Vanderbilt University, Nashville, 1909; of Louisville; died in Hot Springs, Ark., March 31, from heart disease, aged 23.

Lindley Park Cornell, M.D. Louisville Medical College, 1877; died at his home in Knoxville, Iowa, March 29, from heart disease, aged 55.

W. M. Pitts, M.D. Medical College of Georgia, August, 1849; died at his home in Thomson, Ga., March 24, aged 86.

Society Proceedings

COMING MEETINGS

Alabama, Medical Association of State of, Mobile, April 19-22.
Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Society, Washington, D. C., May 3-5.
Ameri[illegible] ssociation, Washington, D. C., May 3-5.
Am. L[illegible] Society, Washington, D. C., April 28-30.
Amer. [illegible] Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American [illegible] ety, Washington, D. C., May 3-4.
American [illegible] Washington, D. C., May 3-5.
American [illegible] shington, D. C., May 3-5.
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American [illegible] ashington, D. C., May 3-5.
American [illegible] ashington, D. C., May 5-7.
Arizona, Medical Association of, Phoenix, April 20-21.
Association of American Physicians, Washington, D. C., May 3-5.
California, Medical Society of State of, Sacramento, April 19-21.
Conf. State and Prov. Bds. of Health, Washington, April 28-29.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
District of Columbia, Medical Association of, Washington, April 26.
Georgia, Medical Association of, Athens, April 20-23.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Maryland, Med. and Chirurgical Faculty of, Baltimore, April 26-28.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Association, Hunter's Hot Springs, May 11.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
South Carolina Medical Association, Laurens, April 19-21.
Texas, State Medical Association of, Dallas, May 10-12.

PHILADELPHIA PEDIATRIC SOCIETY

Special Public Meeting Held March 22, 1910

SYMPOSIUM ON MENTALLY DEFECTIVE CHILDREN

Obstetric Accidents Causing Mentally Defective Children

Dr. Edward P. Davis: We may consider this subject under first, the accidents of pregnancy; second, the accidents of labor. Experiments show that continuous or violent disturbance of an impregnated ovum results in malformation and the production of monstrosities. Maternal impressions from fright or physical violence are undoubtedly followed by the birth of individuals malformed, and in many respects with altered minds. The coincidence is too widely observed to admit of doubt, but the precise manner in which the effect is produced is not clearly demonstrated. Sufficient is known to make it of the most importance that, in the interest of her offspring, the pregnant woman be not subjected to sudden or violent mechanical force or to great nervous shock. Great disturbance in maternal metabolism may result in the birth of malformed and defective children. Hereditary peculiarities of metabolism may influence the development of the fetus, and disturbances in fetal metabolism may also result in the production of defective offspring. Children born during maternal eclampsia may perish from eclampsia or suffer permanent injury to the nervous system. Race degeneration from alcoholism and syphilis furnish familiar examples of the birth of deficient offspring. The accidents of labor affect the fetus through birth pressure and asphyxia. Strict enforcement of the proper hygiene of pregnancy will protect the fetus from the accidents which threaten its intrauterine existence. Clinical experience and a better knowledge of pathologic chemistry enable us to detect maternal and fetal toxemia before eclampsia results and to save the lives of mothers and children. Essential improvement in fetal mortality and morbidity is one of the most striking results of the development of modern obstetric surgery. Still further improvement can only be obtained by applying to all complicated labors the principles and practices of modern surgical technic.

Relation of Ocular Defects to Defective Mentality in Children

Dr. W. T. Shoemaker: Defective mentality is here considered only as applied to children who are deficient or backward, but withal tractable, and offering promise of betterment or standardization. In the examination of the eyes of such children nothing is seen which is not found often enough in children of normal mentality, nor are the deviations from the normal of a strikingly high degree; they are, however, more constant. The relationship between ocular defects and defective mentality is not one of cause and effect; both mental and ocular deflections are equally related to some other common cause. The observed phenomena belong as a rule to that class designated by Walton as deviations, in contradistinction to the so-called stigmata of degeneracy, and children so affected are better classed as deviate or deviates than as degenerates. The ocular deviations may be noted in any part of the ocular apparatus. Errors of refraction have received more attention and more condemnation than all other eye defects combined. Backward children do not as a rule suffer from eyestrain. Ametropia is not a cause of mental deficiency in children but is a serious obstacle in the way of mental development. In dealing with defective children, all obstacles must first be removed, and it must be remembered that all knowledge of the outside world must reach a child through the special senses. There should be secured to the child the best possible vision with the least possible effort. Parents, guardians and teachers should be instructed in the status of the backward child, taught the possible significance of the outward signs of backwardness, and should search for peripheral irritations and obstructions, particularly for those connected with the organs of special sense.

Hearing and Speech of the Backward Child

Dr. G. Hudson Makuen: Three important cerebral faculties are suggested in the title of my paper, those of hearing, speech, and intellectualism, and they are so closely interwoven in respect to their functional activities that no one of them can reach its highest point of efficiency without a corresponding development of the other two. The cortical centers representing these faculties have a close physical interrelationship in their structural development, and each one may be thought of as training or educating the other two. For practical purposes, at least two classifications of defective children should be made. In the first class I would put all those whose defects are of organic origin; in the second class, those whose defects are of functional origin. The classification is not always easy to make and it is my custom to treat all doubtful patients as if they had a structurally normal brain and nervous system until treatment fails to produce the results expected under such conditions. The three avenues by which impressions of speech are carried to the brain are the auditory, the visual and the tactile; and if for any reason one of these avenues becomes closed or is undeveloped, the other two may be trained, up to a certain point, to perform the function of the third; and, as has been strikingly proved in the one case of Helen Keller, two of the avenues may be closed and yet great efficiency acquired by the individual in the use of speech and language. The teacher who does not possess sufficient knowledge of the psychophysical conditions underlying deafness and feeble-mindedness to enable him to determine, to some extent at least, the nature of the difficulties to be overcome, can scarcely be expected to have the necessary patience and skill for the practical application of successful remedial measures.

A little girl of 11 was practically a deaf mute when brought to me three years ago. She has no relative similarly affected. She has never been very strong and had whooping cough when 2½ years old. Her health is now fairly good and she is mentally alert and physically active. I removed her tonsils and adenoids in July, 1907. For the past three years she has been under treatment for deafness and defective speech. In addition to the ordinary treatment for her hearing I have been trying to teach her to make use of the hearing which has been developed and which she seems to have in somewhat latent form. She is now attending one of the special public schools and is getting on very well. She has learned to read the lips readily and speaks very well. The case illustrates some of the advantages of keeping deaf children in their homes and associated with hearing people. The credit of this case belongs largely to the child's mother who has acted on the suggestions which have been given her. Another patient is a boy of 8 whose speech was almost unintelligible. He has been under treatment for about a year in the home of one of my assistants and has made progress.

Possibilities of Development for Mental Defectives and the State's Care of Them

Dr. Martin W. Barr, Chief Physician, Pennsylvania Training School for Feeble-Minded Children, Elwyn, Pa.: Building on Itard's methods for the awakening of the emotions through the exercise of the senses, adding to it Locke's theory of the connecting link between sensation and idea, Seguin gradually formulated a program which, verified in Paris, he later brought to America, and lived to see the fundamental principle governing the development and training of mental defectives throughout the world. It involves the careful diagnosis of physiologic and psychologic conditions, the development and strengthening of faculties and aptitudes or, as necessity may indicate, the restraining of certain instinctive and moral tendencies. Thus a study of functions and aptitudes, and the enlisting of the emotions, has revealed manual training to be a superlative motor in the development of mental defectives, while a prolonged observation of instinctive and moral tendencies shows a predominance of the former over the latter, amounting in many cases to absolute exclusion of the moral sense necessitating constant and life-long surveillance and protection. As schools for the feeble-minded have multiplied, individuals of similar aptitudes have been massed, the trainable being separated from the untrainable until a clear-cut grouping, according to ability and with corresponding occupations provided, has become the natural result. From this experience, an educational classification has been formulated meeting the needs of every known form of mental defect. From the classification it is obvious that a correct diagnosis is of primary importance. It is absurd to speak of cure. Defect is not disease as is insanity, and even when brought to its best condition, that irresponsibility—the unfailing characteristic of this perpetual childhood—precludes permanent success in anything. The influence of our methods on public education is evidenced in the recognition of backward children and the special schools furnished by boards of education. It is estimated that there are about 10,000 avowed cases of mental defect in Pennsylvania. Of these, the state provides for only 2,479. It is greatly to be desired that more adequate provision for both protection and prevention of mental defectives may be made and that, too, along lines of massing and grouping such as experience has already proved most practical and economical, giving asylums for the idiots and helpless classes, custodial institutions for moral imbeciles with suitable occupations; and training schools from which laborers and artisans may be drafted. These provisions should be accentuated and strengthened by the two essentials, asexualization and permanent sequestration.

How to Get the Best Results in Training the Mentally Deficient Child

Mr. E. R. Johnstone, Vineland, N. J.: The first thing to do is to make a careful inquiry concerning the results of the training in the past. The mentally deficient child is actually trainable to a noticeable degree only through a space of a very few years. The most important factor in training is the selection only of those things which will lead to knowledge and power such as the pupil is likely to want to use and to have the opportunity to use. The mentally deficient child if actually defective should be under custody somewhere all his life. He will never earn his living by head work and, therefore, will need only enough of the "three R's" to teach him the simplest things. We must begin with the child and try first to ascertain those things which make him happy. If he is quite low-grade he likes to do things near or with the people who will give him much attention. There should be more direct connection of activities between the home and the school. The teacher of the defective child must train him through things which he understands, must begin on known ground.

Mentally defective and mentally deficient children will always be found in the public schools. These should be placed in special classes and the teachers should be the best obtainable who will hold before themselves always this question: Will this particular child ever use, or ever be able to use this thing I propose to teach it? To help answer this question there should be careful investigation of what has become of the children who were slow in going through the primary classes and those pupils who leave school over age but far behind. The class rooms for these children should be large, light and well ventilated. The regular desks should give way to tables and chairs which can be removed to one side and so give a large floor space for games, etc. There should be work benches and all ordinary needful tools and supplies. Window boxes, gardens, etc., lead to practical nature study which should be a direct step toward farming. Most of the girls may become good house girls and the boys will be assistants to carpenter, plumber, painter, etc. I am not asking that these children be made mechanics or artisans, but that realizing their deficiencies they be prepared in every way for the life they will probably lead.

Discussion

Dr. William Burks, Bureau of Muncipal Research: We need very much some rough-and-ready test to indicate somewhat definitely the degree of departure from the normal of a given individual. The importance of that from a non-scientific point of view is that most of the mental defectives are not known. Such children are known to be queer, or stupid, or asinine, but no one knows just what the trouble is. I suspect that there are several hundred children in the schools of Philadelphia who do not belong there; they are in the way of other children, of the teachers, and of themselves, worrying along, becoming more nervous and more backward. We want the right thing done for the children, and if segregation and asexualization of defective children are proper methods, they ought to be carried out. That will not be done, however, until the people are educated to look for a test separating the defective from the normal. We ought not to be talking so much about curing or treating backwardness as about preventing it.

Dr. James Thorington: In my experience of sixteen years in examining the eyes of children at Elwyn and Vineland, I have noted much improvement from the proper adaptation of glasses to bring up the visual acuity. In a number of cases marked change was noted in the dispositions of the children.

Dr. Walter S. Cornell: In asking for a rule by which any one can diagnose these defective children it must be remembered that inherent feeble-mindedness is essentially a medical subject. A diagnosis can best be made from the sociologic, physiologic and pedagogic points of view. In the doubtful case one must subtract or add for the child according to its mentality or environment.

Dr. S. D. Risley: I think we should have another chair in our medical schools which should be specifically devoted to the study of sociologic medicine. It seems to me that the only person qualified to make such a classification as has been asked for is the expert. Such a classification is important not only for the teacher but for those members of the medical profession who are studying how they may benefit the backward child. It seems to me that the so-called backward child should be separated from the defective child in the sense in which this term has been applied by Dr. Barr and Mr. Johnstone. The former can be helped. The latter is helpless and hopeless from the cradle to the grave. It is of little value to put spectacles on a child who is essentially an imbecile. Many of those placed by Dr. Barr in the high grade can be helped very materially by removing some defects of their special senses, but their mentality is not such as to make them useful citizens aside from the training and care given in an institution. The backward child may be backward because of defective eyes, which is quite different from being mentally defective.

Dr. Ernest Laplace: The diagnosis of mental deficiency is no more to be treated in a haphazard manner than is the diagnosis of fever. Without knowing the cause we are not likely to know the remedy. From the surgical standpoint I find that a child is often backward because of adenoids or phimosis, or because of tongue-tie. There is also the general condition of backwardness in a child because the brain retains a certain amount of pathologic results of a former disease that the child has acquired or inherited. Sometimes a child is backward and the cause may be found in mother, father or grandfather. Congenital syphilis may not manifest itself until later years and sometimes in an obscure form. There is necessity for another chair in our medical schools, a chair of eugenics. The question must be thrown back to the source of medical education and the medical schools must take up the question and furnish means whereby a child can be located in a school for backward children and given a prescription. As in nervous diseases, we give massage, etc., so also there must be treatment according to the prescription of the professor of eugenics.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Twentieth Annual Meeting, held at Baltimore, March 21-22, 1910

(Continued from page 1229)

The Five-Year Course

Dr. John W. Scane, McGill University: That the medical course should be extended beyond the four years seems pretty well agreed both in this country and in Canada. The problem seems to be to decide whether the added year be devoted to the primary branches, including the preliminary scientific subjects, or to increased clinical work in the hospitals. Many schools have solved the problem to their own satisfaction by demanding a high standard of preliminary education. From the standpoint of time, is it not possible to ask the student to spend too many of the most valuable years of life within the four walls of a college. One, or, at most, two years in the academic course should be sufficient, and most of that time should be spent in the study of science subjects. The ordinary work of the academic course in the science subjects is not, as a rule, extensive enough, nor is it suited to the special needs of the medical student. Therefore, courses should be arranged with a definite purpose of emphasizing their bearing on the basic subjects of anatomy and physiology. At McGill it is felt that the first year of the five-year course is as much a part of the medical course and as necessary to the student's future success as is the final year, which is spent in the study of clinical subjects in the hospital. The object has been to increase the number of hours devoted to the preliminary science subjects and to give as much of the additional time as possible to bedside work in the hospital. Most of the fifth year is devoted to hospital work. During the first year, biology, embryology, general chemistry, physics, anatomy, histology, and elementary bacteriology are taught. The second year work includes histology (up to Christmas), anatomy, physiology, organic and biologic chemistry, and pharmacy; the third year physiology (including physiologic chemistry), pharmacology, pathology, bacteriology, clinical microscopy and clinical chemistry are taught; the student also begins to visit the hospital, and is instructed in physical diagnosis, surgical methods and minor surgery. The fourth year takes up therapeutics and materia medica, medicine, surgery, obstetrics, gynecology, medical and surgical anatomy, and pediatrics. Hygiene, medical jurisprudence and mental diseases are taught in the fifth year. In Canada one of the provinces requires five years in medicine, a second province has just made this requirement, and four of the western provinces will follow suit.

DISCUSSION

Dr. Eli H. Long, University of Buffalo: Several institutions in this country have had an optional fifth year, but, on the whole, this has not been satisfactory. I believe that if the fifth year is made obligatory we are on the right track. Some colleges have made the fifth year a hospital internship year. It seems as though the fifth year will be inevitable, but it must be compulsory. Even now, most graduates enter a hospital after graduation, so that the best students voluntarily add a fifth year to their training. In adding the fifth year we must not think of overcrowding the student by adding extra work to the curriculum.

Dr. A. Ravogli, Ohio State Medical Board: I would advocate making the fifth year an obligatory hospital internship or, as is done in some countries, a year spent in practice under the guidance of a preceptor.

Dr. Egbert Le Fevre, University and Bellevue Hospital Medical College: I think the Canadians have solved this problem in a very practical way. We must remember, however, that it is the function of the medical school to make physicians but not the finished product. If a man does not get his theoretical training in a medical school, the probability is that he will never get it, so that we must have enough time for theory. When he comes to the five-year course we must decide whether it shall be purely a hospital training, or scientific training. I hope in the near future to see this association arrange a five-year curriculum so that when the time comes we will be ready for it.

Dr. J. W. Holland, Jefferson Medical College: When the curriculum committee of the Council on Medical Education of the American Medical Association prepared its schedule, the hours numbered 4,600, which was considered at least 600 hours too many. When the respective chairmen of the different groups were asked to cut down on their hour requirement. each one protested. I then proposed lengthening the course, as that seemed to be the only alternative, but the proposal did not meet with approval because it would give 400 hours to the biologic subjects that had been pushed out into the state universities. There is a vast difference between work done in the college and that done in the medical school. Not enough time is given to medical instruction. That forces the students at the expense of the final product. The majority of the students in many of the eastern schools take five years in medicine now. From 60 to 80 per cent. of the graduates in Philadelphia take hospital work for from 12 to 18 months after graduation. The hospital supports these students during that time, so that the item of expense is eliminated. If a sufficient number of colleges got together and agreed that at the beginning of the 1911 course they would demand five years in medicine, it could be carried out.

Dr. E. P. Lyon, St. Louis University: I favor demanding five years in the medical school rather than a preliminary year in the literary college because the literary colleges on which we are dependent for students are not prepared to give the students adequate training in one year in chemistry, biology and physics. Even if they were prepared, these subjects would be taught better in the medical school. Therefore, our school will make the preliminary year definitely one in the medical school.

Dr. Isadore Dyer, Tulane University: At Tulane 10 per cent. of the students remain in the Charity Hospital for two years, making a six-year course. Many more would take advantage of this if opportunity were offered.

Dr. W. B. Hill, Marquette University: If we could lengthen the annual course, shortening the vacation period by, say, one month, we could easily cover the ground. The children in the public schools have a ten months' session, practically forty weeks, and there is no reason why the medical student, who is better prepared to study than these children are, cannot do as much.

The Medical Curriculum

Dr. William H. Welch, Johns Hopkins University: The object of medical education is to make good physicians. A given course that has no bearing on such training has no place in the medical curriculum. It is impossible to impart all of medical and surgical science to the student in four or five or even more years. The most we can expect to do is to give the student a fair knowledge of the principles of the fundamental subjects in medicine, the power to use the instruments and the methods of his profession, and to appreciate his attitude toward his patients and toward the fellow members of his profession. Put him in a position to carry on his education himself, because his education is only begun in the medical school. Of course, much depends on the teacher. No one could sit under John Dalton and men of his type without getting an education, an inspiration and a stimulus for the rest of his life. I think there is great danger in attempting to standardize the curriculum, because our methods of education are by no means final. We are only in a transitional stage in medical education. We should not attempt to set up anything in the way of a rigid uniform curriculum and, above all, it is nothing short of a calamity for state boards to indicate in their requirements for licenseship to practice what the standards of the curriculum should be. As to what shall be the context of the medical curriculum, I think the seven principal subjects still remain the backbone of medical education: Anatomy, physiology, pharmacology, pathology, medicine, surgery, and obstetrics and gynecology. Of course, every medical school must be in the position to offer elective work in the so-called specialties in medicine. It is impracticable to give the student thorough training in any specialty during his undergraduate life. I hope the time has come for nearly all schools to exclude from the medical curriculum studies which should be preparatory to the study of medicine, such as general chemistry and physics. They have no place in the medical curriculum. If educational conditions are not such as to include proper training in general chemistry, I dare say it is still necessary that it be taught in the medical school, but we must look on that as an impediment.

It is also important that the curriculum should not be too crowded. The student should have time for reading, exercise, and the digestion of knowledge. Courses in the specialties should be more or less optional, although there should be a minimum requirement in each subject. In the ideal curriculum there should be certain subjects which are optional, and others which are obligatory. Students should also be given the opportunity to take major and minor courses in the essential subjects. Only a very few medical schools can at present construct a curriculum on this basis, but it is none the less the ideal course. At Johns Hopkins this plan is pursued on the trimester system, and it is working out beautifully. As regards the arrangement of the curriculum, the so-called laboratory subjects are given during the first two years, and the practical subjects during the last two years. It is a question whether the student should not be given the opportunity to come in contact with patients as early as his second year in college. It would be a very decided improvement.

The character of the curriculum will depend a good deal on the methods of teaching. Laboratory teaching is, of course, ideal, but it must be supplemented by quizzes, recitations, and outside reading, so that the student will have a broader and more comprehensive view of the subject. It is certain, however, that we can devote more time than we do to-day to laboratory methods. We must improve the curriculum in the clinical department. The great thing to-day is a proper relation of the medical school to the hospital. It is a difficult thing to establish such a relation. If hospitals saw their interests, I think they would establish closer relations. The ideal is for the school to have its own hospital, and that, I think, is the most urgent need of medical education to-day.

My plea is for a flexible curriculum and not for a uniform, standardized, rigid curriculum. The state boards have had their influence on the character of the medical curriculum. State board examinations have been of great value to medical education; they have crowded the poorer schools to the wall and raised the standards of those that survived. At the same time, the character of these examinations is not such as is adapted to the best sort of a medical curriculum, because they are not practical examinations.

State Boards and High Entrance Requirements

Dr. Herbert D. Harlan, Maryland State Board of Medic[illegible] Examiners: State boards, while far from perfect, have done, are doing and will continue to do good and effective work. There ought to be a few richly endowed medical schools taking high ground, admitting only students who are well-advanced, and giving them every possible advantage. But the boards and this association are not concerned with these. It is our duty to fix and maintain minimum standards of medical education. The maximum should have no limit. It is my opinion that no one thing will do as much to raise the standard of a medical school as a high entrance requirement. It is also my opinion that a good four-year high-school course is at this time a sufficient requirement, and that boards and associations, councils and committees on medical education will have full scope for all their energies if they devise an effective way to enforce strictly the present standards of entrance requirements.

DISCUSSION

DR. AUGUSTUS S. DOWNING, New York Board of Regents: There are two standards. The first is the local standard, which is determined by the legislature, and interpreted by the state board in the interest of the people, and not in the interest of institutions. The second standard is the institutional standard. The former should be made just as high as possible to the best interests of the people of the state, while the institutional standard should be made as high as the institution can carry. Before determining what a standard is, however, one must know where it comes from. There are high schools and high schools. Some high schools, four-year schools, are not doing any more work than would entitle them to be considered one-year schools. In New York high schools are rated on that basis. Every state should know what the instruction of every secondary school in the state is worth. Some colleges, for instance, give an A.B. degree when in reality the work done has not been that of a two-year high school. So when we come to talk about standards, we must bear in mind what the work of these secondary schools is. Wherever a locality can put up a standard to one year of college work, wherever the law will bear it out, wherever the condition of the institution will warrant it, by all means put it up; but remember that a general rule cannot be asked for in this country. When a school has the means and the power to do university work in medicine, it should do so.

Teaching of Ophthalmology

DR. A. R. BAKER, Cleveland College of Physicians and Surgeons: If all medical schools taught their students how to refract, the family physician would be in a position to do this work, the optometrist would pass out of vogue, and we would not have to fight optometric legislation. The teaching of ophthalmology is not carried out properly in most medical schools, the average teacher is contented to do a few cataract operations, to exhibit a few cases of obscure diseases of the eye, to point out the difficulties of diagnosis, and to impress on his students not to meddle with the eye, but to send all these patients to the specialist. I would advise teaching anatomy, histology and embryology of the eye to the freshmen, physiologic optics to the sophomores, refraction, retinoscopy and ophthalmology to the juniors, and practical work to the seniors

Economic Value of Refraction by Family Physicians

DR. LEARTUS CONNOR, Detroit: Family physicians as a class lack a working knowledge of simple refraction. Recognizing the value of the possession of such knowledge, a number of state boards are now requiring as a prerequisite for licensure a practical test in refraction. At present, very little of this work is being done by the family physician because of his inability, and yet we are all agreed that the income of the family doctor would be increased very considerably if he were able to do refraction work. It would form a point of contact with the specialists. The simple cases would be taken care of by the family doctor; the complicated ones by the ophthalmologist. There would be no need for opticians and optometrists. The interests of the patient would be concerned, the relationship of the physician to the patient would be strengthened, and in every way conditions would improve. Hence, if the study of refraction enables the family physician to place more correct lenses before the eyes of his patrons, there is an increased economic value to be credited to ophthalmology. There is no more reason for sending every refractive case to a specialist than for sending every obstetric, surgical or nervous case to a specialist.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Legislation in Kentucky

The medical profession in Kentucky has been remarkably fortunate in securing from the state legislature during the past session the enactment of all the measures which it desired. H. B. 108, which provides for the punishment of any person procuring a miscarriage on a pregnant woman by any means whatever has become a law. Section 4 of the law provides that the woman herself shall be a competent witness in any prosecution and shall not be considered an accomplice. Senate Bill 26, establishing a bureau of vital statistics and providing for the reporting of births, deaths, etc., has also been passed. The annual appropriation bill contains provision for an appropriation of $30,000 for the use of the State Board of Health and $10,000 for a hospital for incurables. This is certainly a creditable record and the enactment of these laws will do much for the cause of public health in Kentucky.

The *Kentucky Medical Journal*, for April, says editorially: "The General Assembly adjourns just as the *Journal* goes to press, and we have only time to announce that, thanks to an united profession and its lay friends, and especially to the devoted brother physicians in the legislature, every one of whom is a member of his county and state society, every measure for which the profession stood was passed by a practically unanimous vote. . . . Far more was done to protect the health and lives of the people of Kentucky by this legislature than was ever done by any other in the history of the state, and if we continue to prove worthy of it, the possibilities of the future are without limit."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—First Weekly Meeting

SUBJECT FOR THE MONTH: DISEASES OF THE NOSE AND THROAT

ANATOMY

NOSE: External nose; bony arch, cartilaginous arch, alæ, septum. Nasal cavities, Schneiderian membrane, turbinated bones, meati, nerves, blood-vessels. Accessory sinuses.

PHARYNX: Divisions, attachments, muscles, nerves, blood-vessels. lymphatics.

LARYNX: Shape, position, attachments, cartilages, ligaments, muscles, vocal cords, blood-vessels, nerves.

PHYSIOLOGY

NOSE: Smell, warming air, resonant cavity, filtration of air.

LARYNX: Voice production, function of pharynx.

EXAMINATION OF UPPER AIR PASSAGES

LARYNGOSCOPY: Physical laws involved, illumination, instruments.

ANTERIOR RHINOSCOPY: Pharyngoscopy, posterior rhinoscopy. Digital examination of nasopharynx. Laryngoscopy.

DISEASES OF THE NOSE

ACUTE RHINITIS: Etiology, treatment.

SIMPLE CHRONIC RHINITIS: Diagnosis, treatment.

PURULENT RHINITIS: Symptoms, treatment.

HYPERTROPHIC RHINITIS: Pathology, diagnosis, treatment. Use of galvanocautery, chromic acid, snare.

ATROPHIC RHINITIS: Etiology, symptoms, treatment.

NASAL HEMORRHAGE: Etiology, treatment.

REFERENCE BOOKS FOR THE NINTH MO[illegible]h.—*Works on Diseases of the Nose, Throat and Ear*[illegible] *Packard, Shurly,* Coakley, Kyle (D. B.), Gleason and [illegible]orth.

Medicolegal

Physician's Claim Not Kept Alive by Payments by Patient's Wife—Admissibility in Evidence of Diaries

The Third Appellate Division of the Supreme Court of New York says that, in the case of Mott vs. Ingalsbe, as executor of one Northrup, deceased (120 N. Y. S. 151), the plaintiff, a physician, was awarded by a referee $170 on a claim of $1,744 for professional services rendered to said Northrup during a period extending over 21 years prior to his death. The referee decided that the statute of limitations of the state of New York was a defense to so much of the claim as accrued more than six years prior to the death of the said Northrup, and permitted a recovery for whatever services the plaintiff was able to prove had been rendered within such period of six years. The court considers that the referee correctly applied the statute of limitations. The payments claimed to have been made on account of the services were made by Mr. Northrup's wife, without his knowledge or consent; nor were they, so far as appeared, authorized or ratified by him, so that they did not remove the bar of the statute, or keep the rejected portion of the claim from being outlawed.

But the referee, the court holds, erroneously excluded from evidence some of the plaintiff's books of account. These consisted of divers small books or diaries containing original entries of his professional visits. If admitted in evidence they would have tended to show that he had rendered more professional services within the six years prior to Mr. Northrup's death than he was able to demonstrate without the aid of such books. Two witnesses testified that they had previously employed the plaintiff from time to time, and that they had settled their accounts with him from his books, and on such settlements found his books to be correct. The accounts thus testified to by these witnesses were contained in four books. The referee found that the accounts of these witnesses as contained in the books were correct, and that the said four books were honestly and fairly kept, but excluded the remainder of the books because they contained no entries of the accounts which were settled by these witnesses. It appeared that the plaintiff kept no clerk, and some of the services indicated by the books had been in fact rendered to Mr. Northrup as found by the referee. The preliminary proof necessary to make the books admissible in evidence was thus brought squarely within the rule declared in Vosburgh vs. Thayer, 12 Johns. 461, and many times reiterated. If these accounts had all been kept in one book, unquestionably such book, after the preliminary proof here made, would have been competent evidence. The fact that they appeared in various books was an unimportant circumstance. What was required within the rule of the Vosburgh case was proof that the plaintiff kept "fair and honest accounts, and this by those who have dealt and settled with him." The purpose of this requirement is to raise a presumption of the accuracy of the bookkeeping methods, and such presumption, when established, is not necessarily limited to the books containing the accounts of the witnesses called to establish the fairness of such accounts.

The judgment must be reversed, the referee discharged, and a new trial granted.

School Not "Regularly Conducted" if Incorporated Only in Another State

The First Appellate Division of the Supreme Court of New York has rendered a decision of general importance and interest in People vs. Reid (119 N. Y. S. 866), although the application in the case was but for a license to practice osteopathy in the city of New York. The "college" from which the applicant for the license claimed to be a graduate, it appeared, was located in the city of New York, but was incorporated under the laws of the state of West Virginia, as a stock concern, and had not been given permission by the regents of the state of New York to assume the name "college" or to confer diplomas or degrees, and had not obtained from the secretary of state a certificate authorizing it to do business within the state of New York. The evidence, the court holds, made the question as to whether this was a school or college regularly conducted, within the purview of the statute, one of law, which is decided in the negative.

The legislature of the state of New York evidently intended, the court says, to provide for licensing osteopaths who are graduates in good standing of a school or college of osteopathy duly organized, existing, and conducted under the laws of any state or territory within the United States; but it was not intended to provide that graduates of schools or colleges of osteopathy conducted within the United States, but without the sanction of the law of the state in which they are conducted, which is presumed to provide for proper supervision, should be licensed to practice osteopathy. Surely the legislature did not intend to recognize a school or college which was being conducted in violation of the laws of this state (New York), nor did it intend to recognize a school or college conducted in any other state or territory in violation of the laws of that state or territory.

It will not do to give to the words "regularly conducted school or college" the limited meaning for which counsel contended, namely, that they have reference only to the regularity of the sessions and continuity of the course of study at the school or college. The word "regularly," as used in legal proceedings and statutes, has a much broader meaning, and is ordinarily used in the sense of "duly," which means "lawfully," or "legally;" and such, the court thinks, is the meaning that the legislature intended by the use of those words in the provision of the statute involved here.

Qualification of Physicians as Expert Witnesses

The Supreme Court of Florida, Division B, says, in Copeland vs. State (60 So. R. 621), a homicide case, that a physician as witness was allowed to testify to the physical symptoms produced by strychnin poison, and to the exaggeratedly congested condition of the abdominal viscera of the deceased which he found to exist on an autopsy made by him of her body shortly after her death, and to state that the conditions that he found might have been produced by strychnin or ergot poisoning. He also stated that he had never had any personal experience with a case of strychnin poisoning; that all that he knew about it was derived from the study of medical books. A motion was made to strike out this evidence on the ground that the witness showed by his testimony that he had not had any personal experience or personal observation in cases of strychnin poisoning, but the motion was denied, and the court does not think that there was any error here, the rule being that, to give an opinion on medical questions, one may be qualified by study without practice, or by practice without study.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

March 26

1 The Sense of Contact and the Genesis of Pleasure and Pain. E. B. Bronson, New York.
2 *Diagnosis and Treatment of Intestinal Protein Indigestion. A. E. Thayer and R. C. Turck, Jacksonville, Fla.
3 Nuclein by Intravenous Injection in the Treatment of Tuberculosis. E. P. Ward, St. Louis.
4 Personal Experiences with a Few Cases of Pellagra. P. V. Anderson, Morgantown, N. C.
5 Sinus Thrombosis Complicated by Cerebellar Abscess and Purulent Leptomeningitis. A. Braun, New York.
6 Salivary Calculi. G. T. Welch, Passaic, N. J.

April 2

7 *Visceral Sarcomata: Sarcoma of the Stomach, Heart, Mediastinum, etc. W. G. Thompson, New York.
8 The Surgical Management of Urethral Stricture and its Complications. E. Fuller, New York.
9 Freud's Views of the Mechanism of Hysteria. J. Smith and M. L. Neff, Brooklyn.
10 The Athletic Life in its Relation to Degenerative Changes in the Cardiovascular System. R. E. Coughlin, Brooklyn.
11 Acute Hemorrhagic Pancreatitis: Autopsy. J. C. Calhoun, Buffalo.
12 Uro-ureter from Neoplasm. B. Robinson, Chicago.
13 Cataract Operation on the Insane. F. M. Fernandez, Havana, Cuba.

2. **Intestinal Protein Indigestion.**—Thayer and Turck claim that intestinal indigestion of proteins is very frequent. Tryptophan is split off in the course of protein digestion, from which are produced indican and indolactic acid, which appear in the urine. They are the cause of symptoms of autointoxication. The clinical symptoms due to protein indigestion are manifold. Any of the great systems of the body may become deranged through them. For a long time the trouble is functional, but organic disturbances may result. Patients with enterotoxemia are frequently treated for long periods for anemia, headache, neurasthenia, disease of the skin, the liver, or the kidneys, or for "dyspepsia" of undefined type, with but transient, if any, relief, and frequently drift from one physician to another in habitual invalidism. Almost without exception they are self-medicators, repeatedly prescribing cathartics and other drugs for themselves, for experience has shown them that a brisk purge gives relief for a day or two. A patient may be in apparently good condition with no marked loss of weight, and without pallor, and may have a fair appetite; or there may be severe anemia, marked decrease in weight, lassitude, mental weariness, insomnia, melancholy, constipation, scanty urine and albuminuria. As a rule, the history covers periods of months or even years, and often includes an unwise use of proteins in the diet. Cases of protein enterotoxemia are more common among adults, but they may also be found among infants. It is very important to observe that this condition of protein enterotoxemia is almost without exception secondary to some other condition. The treatment includes cleansing of the bowels by laxatives, administration of ferments, removal of much protein material from the diet, intestinal disinfection, treatment of gastric secretions, and tonics.

7. *Visceral Sarcomata.*—In *forty-three cases of sarcomata* seen by Thompson, the disease showed the usual predilection for the jaw, pelvic bones and thigh. There were also seven cases involving lymph nodes in the neck. The growths were multiple, but there was no tendency to visceral or cutaneous metastases. One visceral case involved the kidney and one the occipital lobe of the brain, without metastases. There was one case of lymphosarcoma of the intestine in a patient 53 years of age, but there was no involvement of the other viscera or skin. In two cases the tumor was situated in the right orbit, without metastases to the liver or other organs. There were two cases of melanosarcoma of the skin with multiple growths which were very numerous. They were also without metastases, apart from the skin, at the time at which they were under observation. One of these cases involved the trunk and lower extremities, the other the trunk and upper extremities. This series of cases emphasizes the comparative frequency of visceral metastases, even when the local growths had attained to considerable size, whereas in the four cases of Thompson's personal series, the visceral extension was the most serious part of the disease. In one of these cases the primary tumor was in the eye, the metastases in the liver appearing three years after the eye tumor began. In the second case, a rapidly growing mediastinal lymphosarcoma caused sudden death from pressure. The third case, a melanosarcoma, showed 185 skin tumors appearing after the removal of a pigmented mole. The lung of the left side was almost solid. In the last case a sarcoma of the stomach involved also the heart and kidneys.

Boston Medical and Surgical Journal

March 31

14 *The Treatment of Infections of the Urinary Tract with Bacterial Vaccines. H. F. Hartwell and E. C. Streeter, Boston.
15 Ectopia of the Kidney: Report of Cases. J. C. Munro, Boston.
16 *Correlation of Respiration and Heart Beat During Exercise. E. A. Wright, Boston.
17 *Growing Pains: Possible Mechanical Explanation. L. T. Brown, Boston.

14. **Treatment of Infections of the Urinary Tract with Bacterial Vaccines.**—Hartwell and Streeter report in detail cases of urinary infection in which urinary antiseptics, irrigations, and vaccines were used alone or in combination. They reached the following conclusions: Bacterial vaccines are efficient in relieving symptoms in mild forms of cystitis, but have less marked effect on pyuria. They are without value in severer forms of cystitis. They probably hasten recovery in pyelitis. They have no influence on bacteriuria.

16. **Correlation of Respiration and Heart Beat.**—Wright believes that the correlation between respiration and heart beat during exercise is determined, in part, indirectly, through the cause leading to increased respiratory activity, but not at the beginning of exercises, but mainly by independent causes acting in harmony with each other.

17. **Growing Pains.**—It is said by Brown that strained or relaxed sacroiliac joints may be a marked factor in causing "growing pains" in children; that the treatment consists in giving support, combined with systematic exercise to these joints until they are strong enough to carry out their functions without causing any symptoms in the rest of the body; that the treatment is important not only from the point of view of the present day comfort, but equally so in regard to the health and efficiency of the child when it grows up to take its part in the world's work.

New York Medical Journal

April 2

18 *The Dissemination of Disease by the Fly. H. G. Beyer, Washington, D. C.
19 * [illegible] the House-Fly and Thus Preventing Disease. E. P. Felt, Albany.
20 *The Relation of Medicine to Pharmacy. M. Barbour, Philadelphia.
21 The Ideal Tonsillectomy. J. A. Pratt, Aurora.
22 Milk Intoxications by Ergotic Flora. C. R. Fitzpatrick, New York.
23 Present Status of the Treatment of Diffuse Peritonitis. A. E. Hertzler, Kansas City.
24 Modern Conception of Immunity to Diseases. J. V. May, Binghamton, N. Y.
25 Transfusion in Obstetrics and Gynecology. C. C. Sichel, New York.

18. **Dissemination of Disease by the Fly.**—The diseases discussed by Beyer in which the house-fly is a highly important etiologic factor are: Tuberculosis, leprosy, cholera, plague, summer diarrhea of children, carbuncle, frambesia, oxyuris, tenia, swine plague and typhoid.

19. **Controlling the House-Fly.**—We should not assume, says Felt, that the house-fly will entirely disappear in the near future. It is a remarkably persistent form and it is probable that the housekeeper will feel compelled for some years to come to use screens and other devices to prevent this insect gaining free access to the home. It is frequently necessary to supplement screens by the employment of sticky fly paper. This, though somewhat disagreeable, is much to be preferred to the use of poisonous preparations likely to result in dead flies dropping into food. The elimination of house-flies and their part in the dissemination of disease can be accomplished only through an understanding of the conditions necessary for the existence of the pests, and a general appreciation of the practicability of eliminating them to a very large extent. We should first take care of all materials known to produce large numbers of the insects and, with the knowledge thus gained, proceed against other breeding places until the flies are practically annihilated. Experience has demonstrated the possibility of this latter undertaking, and Felt sees no reason why equally successful results should not follow a determined campaign against the house-fly—an enemy of the human race responsible for the destruction of many lives and one allowed to exist because of our failure to recognize the relation of insects to sanitation.

20. **Medicine and Pharmacy.**—The druggist, says Barbour, should attend to his own business and to nothing else. By acting "physician," he endangers the health of the people, degrades his own professional standing, and loses the confidence and patronage of the physician. Barbour states that he would not trust a prescribing druggist. For a man who allows himself to practice a profession which he never studied, purely for material gain, is dishonest enough to commit all forms of substitutions and even to replace ingredients should it suit his financial purpose. Let each one attend to his own vocation, the one which he has chosen as his life's study, and become qualified and proficient. Let neither usurp the other's practice with subsequent injury to both and to the public. But let each, says Barbour, work in his own prescribed sphere with mutual interest to their respective professions and to the public at large.

Lancet-Clinic, Cincinnati

March 26

26 Requirements for Entrance into Medical Colleges. E. O. Smith, Cincinnati.
27 Medical Education of the Laity. H. Alburger, Bloomington, Ind.
28 Intraperitoneal Exploratory Hysterotomy. B. M. Ricketts, Cincinnati.

Philippine Journal of Science, Manila

October, 1909

29 *An Unusual Case of Amebic Dysentery. H. T. Marshall, Charlottesville, Va.
30 Sixth International Congress on Tuberculosis. F. Calderon and V. G. Heiser, Manila.
31 *The Cutaneous Reaction in Leprosy. O. Teague, Manila.
32 The Nastin Treatment of Leprosy. O. Teague, Manila.
33 Filtration of Immune Serums. E. H. Ruediger, Manila.
34 The Reaction of Culture Media in Relation to the Morphology of the Cholera Organism. Y. K. Ohno, Manila.
35 Immunizing Cattle Against Anticattle-Plague Serum. E. H. Ruediger, Manila.
36 Cholera in Children. A. J. McLaughlin, Manila.
37 Cattle Plague in the Philippines and the Methods Employed in Combating it. E. H. Ruediger, Manila.

29. **Unusual Case of Amebic Dysentery.**—In Marshall's case the acute course of the disease with the abundant hemorrhages and a peculiar nodular form of ulceration were unusual, although several similar cases have been recorded in the literature. The large intestine contained a large amount of dark red, almost black, pasty material in which amebas were numerous. From the ileocecal valve to the lower part of the rectum the mucosa was studded with nodular elevations which varied from 6 to 12 millimeters in diameter and which rose about an equal distance above the level of the mucosa. In most cases the elevation was surmounted by a mass of necrotic tissue which could be scraped off, leaving a deep crater-like ulcer extending well down through the mucosa. Only one or two small typical, irregular amebic ulcers were observed. Many active amebas were found in the detritus taken from the crater-like ulcers.

31. **Cutaneous Reaction in Leprosy.**—Four different extracts were made by Teague as follows: (1) From nodules taken from living lepers; (2) from the nodulous skin of a dead leper; (3) from the spleen of a dead leper; (4) a control from the skin of a cholera corpse. The material thus obtained was cut into small pieces or ground in a mortar, in the case of the leen, and extracted in 5 per cent. glycerin. It was then eated on the water bath until the volume was reduced to about one-tenth of the original. Fifty lepers were vaccinated with these extracts, a control vaccination with the extract of skin from the cholera cases being made in each instance.

In 2 or 3 cases there was a doubtful reaction, but otherwise the vaccinations were in all respects like the controls. Further attempts will be made to secure a more concentrated extract of the leprosy bacilli. Owing to the low resistance of the tissues of lepers, it was not thought advisable to use the ocular reaction until the cutaneous reaction had been given a thorough trial.

Kansas City Medical Index-Lancet

March

38 A Famous Case Recalled (continued). J. Punton, Kansas City.
39 Subcutaneous Hemorrhages: Enuresis of Neuropathic Origin. F. C. Neff, Kansas City.
40 Personal Investigation into the Dietetic Theories of America. A. Bryce, Birmingham.
41 The Health of Chicago for 1910. W. A. Evans, Chicago.

Vermont Medical Monthly, Burlington

March

42 Paranoia. W. L. Wasson, Waterbury.
43 Pelvic Inflammation. G. M. Sabin, Burlington.
44 Anterior Poliomyelitis. E. J. Melville, St. Albans.
45 Fevers from Cold. W. C. Abbott, Chicago.

West Virginia Medical Journal, Wheeling

March

46 *Sterilization of Confirmed Criminals and other Defectives. J. R. Bloss, Huntington.
47 *What can the Medical Profession do to Prevent Crime? G. D. Lind, Richwood.
48 Influence of Physical Defects of Personalities, Moral Obliquities and Crime. G. H. Benton, Chester.
49 Eclampsia; a Summary of its Treatment. J. H. Steenbergen, Huntington.

46. **Sterilization of Criminals and Other Defectives.**—Huntington believes that the defective classes are multiplying much more rapidly in proportion than the total population. Stringent marriage laws will not control the increase of defectives, for marriage is not necessary to procreation, and especially among irresponsibles. Vasectomy, which does not impair the sexual powers, fulfils every requirement for sterilizing males (other than rapists) and should be provided for by law. Salpingectomy should be provided for among defective females.

47. **Prevention of Crime.**—Lind favors vasectomy as the most efficient means for the prevention of crime.

Southern California Practitioner, Los Angeles

March

50 Rabies—Report of Cases from Skunk Bites. C. E. Yount, Prescott, Ariz.
51 Hydrophobia—Report of a Los Angeles Case. J. R. Colburn, Los Angeles.
52 Uncinariasis: A Los Angeles Case. J. M. King, Los Angeles.
53 Ptomain Poisoning—Eleven Fatal Cases. G. W. Peck, Sawtelle.
54 Medical Expert Testimony. A. S. Lobingier, Los Angeles.

Albany Medical Annals

March

55 *Specialization in Medicine. A. S. M. Chisholm, Bennington, Vt.
56 Epiphyseal Fracture of the Upper End of the Humerus. J. M. Berry, Troy, N. Y.
57 Treatment of Tuberculous Adenitis. A. F. Holding, Albany, N. Y.
58 Electric Treatment. H. M. Imboden, Clifton Springs, N. Y.
59 Radiotherapy. H. W. Van Allen, Springfield, Mass.

55. **Specialization in Medicine.**—Chisholm believes that specialization, while impoverishing the individual, has enriched the profession. What the specialists have lost, medicine has gained. The artists have become smaller but the art greater. The individual has sacrificed scope to depth, "comprehensiveness" to "profundity;" that is, he has sacrificed himself to his profession, but such a sacrifice ennobles the specialist.

Journal of Ophthalmology and Oto-Laryngology, Chicago

February

60 Acute Mastoiditis: Its Etiology, Diagnosis and Treatment. R. J. Tivnen, Chicago.
61 Recovery of Vision in an Amblyopic Eye after Four and a Half Years of Blindness: Contribution to the Question of Amblyopia Ex-Anopsia. C. M. Harris, Johnstown, Pa.

California State Journal of Medicine, San Francisco

March

62 Uses of Bacterial Vaccines in Urinary Diseases. G. MacGowan, Los Angeles.
63 Treatment of Genitourinary Tuberculosis with Tuberculin. F. M. Pottenger, Monrovia.
64 Radical Treatment of Genitourinary Tuberculosis. G. S. Whiteside, Portland, Ore.
65 The Dull or Backward School Child. R. W. Musgrave, Hanford.
66 *Value of Examinations of the Cerebrospinal Fluid in Diagnosis of Chronic Nervous Disease. H. C. Moffitt, San Francisco.
67 Congenital Dislocation of the Hip. H. M. Sherman and G. J. McChesney, San Francisco.
68 Pellagra in California. R. Blue, U. S. P. H. and M.-H. S.
69 Tropical Medicine. C. Wellman, Oakland.
70 Alkaptonuria. J. C. Spencer, San Francisco.

66. **Value of Cerebrospinal Fluid Examination.**—Moffitt examined the cerebrospinal fluid in 25 cases by means of the Nonne and Apelt globulin test or by the Noguchi reaction. He found that the tests are of most value in doubtful cases of general paralysis, tabes or cerebrospinal lues, in which either symptoms or signs are equivocal; or, they may help decide the importance and gravity of many functional nervous symptoms in patients with a history of lues who are suspicious of beginning tabes or general paralysis. Together with the Wassermann reaction in the blood serum and cerebrospinal fluid, they may help in determining the nature of apparent idiopathic epilepsy or in distinguishing brain tumors from syphilitic disease. They must be used, of course, only in conjunction with the general clinical picture, and their value can only be properly judged after the lapse of sufficient time to accumulate many more cases than are now on record. Moffitt emphasizes that it is unwise to practice lumbar puncture indiscriminately, as it is a procedure not without disagreeable sequelæ at times, particularly in neurotic patients with unstable vasomotor systems. There may be severe headache and dizziness for some days following puncture.

Long Island Medical Journal, Brooklyn

March

71 Low-Nitrogen Diet in Typhoid. H. A. Houghton, Bayside, L. I.
72 Traumatic Diseases of the Knee-Joint. R. Hazen, Brentwood, L. I.
73 Surgical Treatment of Gonorrheal Epididymitis. H. H. Morton, Brooklyn.

74 Use of Formidin in Chronic Suppurative Inflammations of the Middle Ear Complicated with Deafness. J. C. Warbrick, Chicago.
75 Tuberculosis of the Peritoneum, Uterus and Adnexa. F. J. Shoop, Brooklyn.

New Orleans Medical and Surgical Journal

March

76 Impetigo—Its Nature and Complications. A. J. Delcourt, Houma, La.
77 Resistant or Neglected Club-Foot in Adolescence. J. D. Bloom, New Orleans.
78 *Blood Findings in Twenty Cases of Pellagra in the Insane Asylum of the State of Louisiana. H. Daspit, New Orleans.
79 Poverty in Relation to Disease. H. D. King, New Orleans.
80 Infantile Scurvy: Two Recent Cases. E. D. Fenner, New Orleans.
81 Medical Aspects of Anterior Poliomyelitis. L. R. DeBuys, New Orleans.
82 Anterior Poliomyelitis: Etiology and Pathology. C. W. Duval, New Orleans.
83 Nervous Manifestations of Anterior Poliomyelitis. E. M. Hummel, New Orleans.
84 Obstetric Surgery. E. M. Williams, Patterson, La.
85 Abdominal Cesarean Section. S. M. D. Clark, New Orleans.
86 Indications for Vaginal Cesarean Section. C. J. Miller, New Orleans.
87 Surgery of Pregnancy, Complicated by Pelvic Tumors. C. N. Chavigny, New Orleans.
88 Curettage: Its Abuses and Indications. W. E. Sistrunk, Lake Charles, La.
89 High-Frequency Currents in Skin Diseases. L. L. Cazenavette, New Orleans.

78. **Blood Findings in Pellagra.**—The blood picture in 20 cases of pellagra examined by Daspit was fairly constant and deviated but little from the normal. There was a slight falling off in the total leucocytes and a relative lymphocytosis, more marked in the small mononuclears. The hemoglobin was consistently good, and the red blood count showed nothing abnormal. These findings may be said to be comparatively negative and to offer nothing of value from a diagnostic standpoint.

Bulletin Johns Hopkins Hospital, Baltimore

March

90 *Isoagglutinins and Isohemolysins. W. L. Moss, Baltimore.
91 *Clinical Experience with the Wassermann Reaction in the Johns Hopkins Hospital. P. W. Clough, Baltimore.
92 Etiology of Movable Kidney. F. W. Griffith, Baltimore.
93 *Nephrotomy by the Silver-Wire Method. E. H. Richardson, Baltimore.
94 *Antityphoid Vaccination, the Immediate Results of the Administration of 3,600 Doses. F. F. Russell, U. S. Army.

90. **Isoagglutinins and Isohemolysins.**—Moss' findings may be summarized as follows: Isoagglutinins occur in the serum of about 90 per cent., and isohemolysins in about 25 per cent., of adult human beings. They have no diagnostic significance. In a number of healthy individuals whose blood was repeatedly tested at varying intervals of time the agglutinating action was found not to vary, while in some cases the hemolytic which was present in earlier tests was absent in subsequent tests. There are at least three different isoagglutinins and three isohemolysins in human sera and three different isoagglutinophilic and three isohemolysinophilic receptors possessed by human red blood corpuscles. There are human sera which contain no isoagglutinin and isohemolysin but whose corpuscles possess receptors for isoagglutinin and isohemolysin. No individual serum appears to contain more than one of the three kinds of isoagglutinin or isohemolysin. The corpuscles of a given individual may possess no isoagglutinophilic or isohemolysinophilic receptors or they may possess two, or all three kinds of these receptors. Human beings can be divided into four groups according to the ability of their serum to cause isoagglutination and of their corpuscles to be isoagglutinated. The serum of members of any one group will not agglutinate or hemolyse the corpuscles of other members of the same group, but will agglutinate and may hemolyse the corpuscles of members of any other group except one. Autoagglutination was not observed in any of the 212 cases investigated and autohemolysis was observed only once. Isoagglutination may occur independently of isohemolysis but isohemolysis is probably always preceded or accompanied by isoagglutination. All the sera investigated contained an antihemolysin which protected the homologous corpuscles, and those of members of the same group from solution by any other serum. This antihemolysin is an antiamboceptor which acts by uniting with the cytophilic group of the hemolysin thus blocking it off from the red blood cell; and probably consists of receptor groups of the red blood cells which have been cast off from the cells or set free by the physiologic or pathologic destruction of the corpuscles. Isoagglutinin is thermostable. Isohemolysin consists of two components: one, thermostable (amboceptor), the other thermolabile (complement). The antihemolysin is thermostable. The origin of isoagglutinins and isohemolysin has not yet been satisfactorily determined. It probably cannot be referred to the destruction and resorption by an individual of his own blood.

91. **The Wassermann Reaction.**—In 99 cases examined by Clough in which syphilis could be excluded the Wassermann reaction was negative in all. In 51 doubtful cases in which clinically, syphilis was not probable, the reaction was positive in 4; in 50 in which syphilis was probable, a positive reaction was obtained in 33, or 66 per cent. In 45 cases which were certainly syphilitic, a positive reaction was obtained in 33, or 73 per cent. Excluding patients who had recently received thorough mercurial treatment, positive reactions were obtained in about 82 per cent. of those showing active syphilitic lesions. Positive reactions were obtained in 40 per cent. of 15 cases of tabes, and in all of the 7 cases of general paresis, which were tested.

93. **Nephrotomy by the Silver-Wire Method.**—The silver-wire method was used by Richardson with results that demonstrate two points: First, the value of the silver-wire method of nephrotomy in certain cases; and second, that the method very clearly has a limited field of application, and should not be employed in every case in which nephrotomy is indicated. Whenever abscesses, fibrous tissues or other pathologic conditions in the kidney render it necessary to exert strong traction on the wire in order to bisect the organ, many vessels will be lacerated, and consequently both the damage to the kidney parenchyma and the hemorrhage will be greater than if a knife were employed. The pulmonary complications in the second case following operation, show conclusively the dangers of omitting compression of the vessels at the hilum, and thus permitting free renal circulation while doing a nephrotomy on an infected kidney. Richardson feels sure that in this case an infected embolus was swept into the renal vein, thence to the vena cava, right heart, and finally lodged in the right lung, where it produced a localized pneumonia.

94. **Antityphoid Vaccination.**—The following conclusions by Russell are based on an extensive and intensive study of this subject:

1. Vaccination against typhoid undoubtedly protects to a very great extent against the disease.
2. It is an indispensable adjunct to other prophylaxis among troops and others exposed to infection.
[illegible] if there is an increase of susceptibility [illegible]
[illegible] the disease, for therapeutic purposes, fails to reveal any evidence of a negative phase.
5. The statement that vaccination should not be carried out in the presence of an epidemic is not justified by the facts at hand.
6. The procedure is easily carried out and only exceptionally does it provoke severe general reactions.
7. No untoward results occurred in this series of 3,640 vaccinations.

Journal of Cutaneous Diseases, New York

March

95 Pemphigus Vegetans; Special Reference to the Cellular Elements Found in the Lesions. M. B. Hartzell, Philadelphia.
96 Case of Pemphigus Foliaceus. H. H. Hazen, Washington, D. C.
97 Case of Pellagra in New Jersey. E. D. Newman, Newark.

Mississippi Medical Monthly, Vicksburg

March

98 Remarks on Pellagra with Report of a Case. A. W. Rhyne, Beulah.
99 Nasopharyngeal Diseases. H. Flowers, Brookhaven.
100 The Indiscriminate Use of Diuretics. S. W. Glass, Dublin.

Annals of Surgery, Philadelphia

March

101 An X-ray Study of Bone Atrophy. E. R. Corson, Savannah, Ga.
102 The Radical Extirpation of Pharyngo-Esophageal Pressure Diverticula. D. Stetten, New York.
103 *The Technic of Lung Resection with the Application of Both Forms of Differential Pressure. F. Sauerbruch and S. Robinson, Boston.
104 Functional Diagnosis of Renal Disease; S[illegible]ecially by Experimental Polyuria. E. L. Keyes, New Yor[illegible]
105 Infections of the Urinary Tract due t[illegible] Bacillus Coli and Allied Organisms. L. S. Dudgeon [illegible]d A. Ross, Philadelphia.
106 *Intraperitoneal Division of one Ureter. [illegible]. D. Barney, Boston.
107 *Perinephric Abscess. M. B. Miller, [illegible]adelphia.
108 Genital Canal Block Following Neis[illegible] Coccus Infection. C. E. Barnett, Fort Wayne, Ind.

103. **Technic of Lung Resection.**—The experiments of Sauerbruch and Robinson have practical bearing in human surgery. They demonstrate that the removal of one lung, or a large portion of the same, can only be accomplished successfully when the cavity persisting after the operation is diminished in size as soon as possible, in order thereby to avoid the accumulation of a transudate. This reduction in pleural capacity is best accomplished by the crowding in of the neighboring organs. They have likewise been able to demonstrate under what conditions this displacement of organs is possible. An operative reduction in the capacity of the pleural space is possible through the mobilization and displacement of the chest wall. If the mediastinum become stiffened by chronic inflammation, the thoracoplasty which we perform may be an extensive one, without dangerous disturbances to the heart or remaining lung. It must be limited to the removal of a few ribs if the mediastinum is a movable one and easily displaced. Suturing the bronchus to the chest wall, which in certain conditions may be indicated, must be done in such a way that tearing of the mediastinum is avoided—that is to say, the chest wall must be approximated as nearly as possible to the mediastinum by means of the mobilization and displacement of the former.

106. **Intraperitoneal Division of One Ureter.**—The evidence derived by Barney from his experimental work, and from the clinical observations of others, is that the abdomen may bear without damage, and even, in some cases, without severe reaction, the effusion of a certain amount of sterile urine, and that it is able to guard itself promptly and efficiently against this effusion by the formation of adhesions. It is also evident, especially in animals, but probably more often than we realize in man, that a divided ureter soon becomes harmless by occluding adhesions or blood clot. It is in those cases in which this prompt occlusion does not occur, seen oftenest in dogs, or when the urine is septic from the start, that a general peritonitis sets in. The first and only sign of injury to the ureter which we may have is the appearance of urine in the laparotomy wound, or in the vaginal vault. In certain other cases accumulating fluid within the abdomen, with or without the formation of a urinary abscess, may be the first sign of the accident. Occasionally a general and severe peritonitis intervenes at once, and the injury is discovered only at autopsy or during the course of a secondary laparotomy.

107. **Perinephric Abscess.**—Of the 36 cases seen by Miller, 25 were males and 11 were females The age of the oldest patient was 60 and the youngest was 10, with the general average of 31 years, omitting the cases of preexisting renal infection, the average age was 28 years, showing clearly that the disease is one of early adult life. The right side was affected in 23 cases, the left in 13. The source of infection was unknown in 20 cases, in 2 there was pyonephrosis, 2 others were probably of renal origin, there was urethral infection in 2, influenza preceded 2, 3 were possibly derived from pelvic disease, peripheral suppurations probably caused 2, and trauma was prominent in 3 instances. Postural changes were noted in 10 cases, in the main being a tendency to flex the corresponding thigh, though in several cases there was some spinal curving and in one with sciatic pain flexion of the thigh was resented. Pulmonary phenomena were seen in 13 cases, varying in intensity from a simple cough to a fatal septic pneumonia; in 3 cases cystitis was present; 1 case developed subsequently a prostatic abscess; 1 patient had otitis media, and 1 had femoral phlebitis; in 1 there was a fatal cardiac dilatation, due to myocarditis; and in 1 the perinephric suppuration occurred in the course of parenchymatous nephritis. The urine was normal in 15 cases, practically normal in 5, having a trace of albumin with casts, etc., in 12, and showing pus in 4. The bacteriologic examination of the pus from the abscess was made in 23 cases and gave sterile results in 2 cases, colon bacillus in 6, staphylococci in 5, *Staphylococcus aureus* in 4, *S. albus* 2, *S. aureus* and *S. albus* in 1, streptococci in 2, and streptococci and pneumococci in 1. Thirty-five abscesses were evacuated and 1 patient declined operation and was discharged; 30 patients recovered and 5 died. This gives a total mortality of 14.3 per cent., or omitting the cases of recognized renal origin, 2 of the 4 patients dying, there is a mortality of 9.7 per cent. The cause of death in the 2 kidney patients was exhaustion in one and cardiac dilatation in the other, but both were probably uremic. In the other cases, one patient died of pleuropneumonia, another of peritoneal extension of the suppurative process, and the third of septic pneumonia. The death-rate is lower than in any previously reported series and compares most favorably with the 34 per cent. mortality of Küster's tables; this is doubtless due to the early recognition of the disease and the adequate drainage without unwise interference with the kidney.

Journal of Abnormal Psychology, Boston

February-March

109 Dreams and their Interpretations as Diagnostic and Therapeutic Aids in Psychopathology. B. Onuf, New York.
110 Conception of the Subconscious. B. Hart, Epsom.
111 Personal Impressions of Sigmund Freud and his Work: Special Reference to his Recent Lectures at Clark University (concluded). J. J. Putnam, Boston.

Buffalo Medical Journal

March

112 Nervous and Mental Manifestations due to Arteriosclerosis. F. H. Stephenson, Syracuse, N. Y.
113 Appendicitis. A. L. Beahan, Canandaigua, N. Y.
114 Necessity for the Filtration of a Polluted Public Water Supply. M. P. Conway, Auburn, N. Y.
115 Melanotic Sarcoma. W. L. Wallace, Syracuse.

Northwest Medicine, Seattle

March

116 Flexner's Antimeningitis Serum. G. B. McCulloch and P. V. von Phul, Seattle.
117 Varicocele of the Broad Ligament. J. E. Else, Pullman, Wash.
118 Social Hygiene. L. W. Hyde, Portland, Ore.
119 Abdominal Purpura and Appendicitis in Childhood. W. Gellhorn and K. Winslow, Seattle.
120 Transverse Incision in Operations for Appendicitis. A. E. Rockey, Portland.
121 Carcinoma of the Rectum—A Plea for Thorough Examination of the Lower Bowel by the General Practitioner. E. K. Scott, Boise, Idaho.
122 Pathology of Tumors of the Bladder. R. V. Dolbey, Vancouver, B. C.
123 Some of the Evils of Medical Practice. H. H. McCarthy. Spokane, Wash.

Archives of Internal Medicine, Chicago

March

124 *Blood Spots: A Medicolegal Study. C. J. Bartlett and S. J. Goldberg, New Haven.
125 *Effect on the Kidneys of Temporary Anemia, alone and Accompanied by Perfusion. C. C. Guthrie, Pittsburg.
126 A Study of Pneumoperitoneum with a Means for Its Diagnosis. W. W. Herrick, New York.
127 *Heart-Block with Infectious Diseases. F. W. Peabody, Baltimore.
128 Bacteriologic Studies on Parathyroid A and Parathyroid B. B. F. Proescher and J. A. Roddy, Pittsburg, Pa.
129 *Quantitative Estimation of Albumin in the Urine. A. F. Mattice, Baltimore.

124. **Blood Spots.**—The following are the conclusions which Bartlett and Goldberg regard warrantable: A blood drop falling only a few inches usually makes a round spot with a smoother border, though even here if the surface on which it falls is rough it may have an irregular border with spatters. When a blood drop falls vertically, whether from a height of only 1 or 2 feet or as much as 6 feet, the height is of only secondary importance in determining the size or shape of the drop or the amount of spattering. Within the limits just mentioned the character of the surface on which the blood drop falls, particularly as to its roughness or smoothness, is the chief factor in determining the amount of spicule formation and the degree of spattering. A blood drop falling vertically 5 or 6 feet on a smooth non-absorbent surface may form almost no spicules or spatters, but irregularities of the surface may cause marked spicule formation and spattering even when the height has been much less than this. The size of the main blood spot made by a drop falling from 3 to 6 feet depends more on the original size of the drop than the height from which it fell. The thickness of the layer of blood in dried blood spots, on surfaces which are non-absorbent or only slightly absorbent, is somewhat less the greater the height from which the blood fell. The height from which blood has fallen cannot be determined by the length of spicules, the elongation of spatters, the distance which spatters have fallen, or by the thickness of the layer of blood, except within wide limits. In general, conclusions as to the height from which blood drops fell, based on any of the appearances of the dried spot, should be made very guardedly.

125. **Effect on the Kidneys of Temporary Anemia.**—The method employed by Guthrie consists in temporarily shutting off the circulation in a segment of the aorta, including the origin of the renal arteries and then perfusing the kidneys by injecting the solution to be tested into this segment by means of a small trochar (or needle) thrust through the wall of the aorta, the instrument being connected by means of a rubber tube with a reservoir connecting the solution. On withdrawing the needle the puncture in the wall of the aorta is closed by several simple stitches which penetrate all the coats of the vessel. The clamps (serrefines) are then removed from the aorta and the abdominal wound closed. The animal is then bandaged and placed in the hospital. Guthrie found that anemia alone is apparently much less harmful than when accompanied by perfusion of any of the commoner salt solutions. The commoner salt solutions do not seem to differ greatly in toxicity. Attempts thus far to devise a non-toxic solution for profusing, *e. g.*, salt-starch solution, have received no encouragement from the results. Anemia with perfusion of the kidneys as a rule is followed by death of the animals within a few months—the majority dying in a few weeks. The cause of the differences in time of death of the animals are unknown. Individual peculiarities may be (and probably are) an important factor. Metabolic disturbances, seemingly in the direction of increased protein metabolism especially, occur. Decrease in urinary secretion preceding death is probably an important factor to consider in interpreting the final symptoms, which are those of uremic poisoning. Structural changes of a hemorrhagic and degenerative character occur in the perfused kidneys. Guthrie's results show conclusively that renal and adrenal anemia, coupled with perfusion with all the solutions tried, is much more harmful than anemia alone. Anemia alone is certainly not to be looked on as being without effect, but it seems that for cats, under the conditions of these experiments, short periods of occlusion are not incompatible with permanent recovery of the animal.

127. **Heart Block with Infectious Disease.**—Peabody holds that disturbances of the function of conduction in the heart muscles are at least occasionally encountered after infectious diseases. They probably occur oftener than is generally recognized, and are perhaps more frequently seen in cases of the "rheumatic series." The disturbance may be either complete or partial. Complete block is due in most instances to an organic lesion of the conduction fibers, but may, apparently, be due in part to nervous influences. Partial block is usually transient, and is probably due to the action of the vagus nerve on a poisoned myocardium. The prognosis depends chiefly on whether the underlying cause is organic or functional.

129. **Albumin in the Urine.**—Mattice regards the phosphotungstic method as being very much more accurate than the Esbach for a comparative quantitative estimation of albumin in the urine. Tsuchiya's reagent should, therefore, supplant the Esbach solution. The method can be relied on to indicate a slight rise or fall in albumin output, which is not true of the Esbach method. Readings are not influenced by changes in temperature to the same extent as with the Esbach test. Foaming or floating of the precipitate is rarely seen, and the precipitate settles much more evenly than with the Esbach reagent. The solution is lighter than water, and when added to urine does not mix until shaken but rises as a clear supernatant fluid, enabling one to read the meniscus accurately at the R mark on the Esbach tube. Because of its low specific gravity the urine needs no further dilution. The method can be used for large amounts of albumin as well as for small amounts. Tsuchiya's reagent is applicable in urines in which albuminuria and glycosuria coexist. Phosphotungstic acid in alcoholic solution is easily prepared, keeps well, and does not stain hands or clothes as does the Esbach reagent. Normal urines treated with Tsuchiya's reagent yield a slight precipitate. The method of Goodman and Stern in Mattice's experience has proved to be very inaccurate.

Gulf States Journal of Medicine and Surgery and Journal of the Southern Medical Association, Mobile, Ala.

March

130 Importance of Recognizing Mild Cases of Pellagra. G. Dock, New Orleans.
131 Early Symptoms of Pellagra. C. C. Bass, New Orleans.
132 Nervous and Mental Manifestations of Pellagra. J. M. Buchanan, Meridian, Miss.
133 Pathologic Findings in Nine Cases of Pellagra. O. L. Pothier, [illegible]
134 [illegible] Results of, and Indications for, [illegible] Harris, Mobile.
135 Early Diagnosis of Gall-Stone Disease. J. E. Cannaday, Richmond, Va.
136 Delirium Tremens—New Plan of Treatment. G. E. Pettey, Memphis.
137 Personal Experiences with Hysteria. S. T. Rucker, Memphis.

Therapeutic Gazette, Detroit

March

138 *The Futility of Administering Antirheumatic Remedies in Certain Patients Suffering from Painful Joints. H. R. M. Landis and C. H. Muschlitz, Philadelphia.
139 Causes and Treatment of Vesical Irritability. C. W. Bonney, Philadelphia.
140 Indications for Therapeutic Abortion; Consideration of the Rights of the Unborn Child. W. Krusen, Philadelphia.
141 The Teaching of Therapeutics. H. A. Hare, Philadelphia.
142 *Contusions of the Back and their Complications. W. Lathrop, Hazleton, Pa.

138. **Painful Joints.**—Landis and Muschlitz emphasize the fact that only rarely, if at all, does prolonged pain in a joint mean chronic rheumatism; therefore salicylic acid and allied drugs have no place in the treatment of these conditions; at best their use affords but temporary relief. To treat these patients properly, a thorough physical examination is essential in order to determine whether the pain is dependent on a functional or an anatomic defect, and in the latter event to ascertain, if possible, whether the joint trouble is secondary to a chronic suppurating focus.

142. **Contusions of Back.**—The most common result of a severe contusion of the back, whether high or low, is extravasation of blood, the separation of the skin from underlying tissues, and the formation of a large fluctuating mass. Pain is present to a greater or less degree, usually being aggravated by any attempt at moving. Accompanying the extravasation mentioned, if the injury be severe, there may be laceration or crushing of muscles, or fracture of the scapula, while severe contusion of the ribs is not uncommon, and Lathrop has seen three cases in which hemorrhage in the lung occurred from a blow on the back, with fatal outcome. In the lumbar and sacral regions we may have contusion of the kidney and retention of urine, with blood in the same when withdrawn. Further, there may be a so-called concussion of the spine, causing temporary paralysis while in some cases complete use of the limbs may require weeks of rest and treatment, even when bladder symptoms have disappeared. A severe contusion low down may involve the sciatic nerve through injury of the gluteal muscles; which are sometimes badly bruised; while in one case the muscles were completely ruptured. A degeneration of a nerve is not impossible after a severe contusion. The treatment advocated by Lathrop is the following: In simple contusions of soft parts the absorption of extravasated blood should be promoted by cold, elevation, and pressure; but if at all extensive, or with marked fluctuation, immediate incision under aseptic conditions will give the best results. Rest is of paramount importance and massage of contused parts, such as elbow, shoulder, knee, ankle and hip, is of great value, after the acute stage is past. Lead and opium, arnica, alcohol and bichlorid applications are all used more or less, and no doubt with benefit. In severe injury involving not only the skin, but the muscles beneath, and possibly the bony structures as well, the best treatment is thorough examination under anesthesia, and treatment of the case as indicated—careful cleansing, suturing of any torn muscles, and provision for drainage. When sloughing occurs, and it does in many instances, the area should be well protected and treated as any other granulating surface. In regard to the spine, a traumatism must be very severe to injure the contents of the spinal canal, and must be regarded as serious; it will require time for repair or improvement, and must be treated largely symptomatically. The prognosis should be guarded at all times.

Providence Medical Journal

March

143 Fractures of the Lower End of the Radius. F. E. Peckham, Providence.
144 Use of Bacterial Vaccines in Therapeutic Immunization. W. G. Dwinell, Pawtucket.
145 Child Life. S. S. Burton, Providence.
146 Chronic Constipation. C. F. Peckham, Providence.

The Proctologist, St. Louis

March

147 The Anal Canal and its Diseases. G. S. Hanes, Louisville.
148 Advancements in Proctology. J. M. Mathews, Louisville.
149 A New Anal Speculum. D. Roberts, Brooklyn.

Journal Michigan State Medical Society, Battle Creek

March

150 Diagnosis and Treatment of Prostatitis and Seminal Vesiculitis. M. A. Fechheimer, Detroit.
151 Suprapubic Prostatectomy. A. McLean, Detroit.
152 Major Amputations. R. H. Spencer, Grand Rapids.
153 *Landmarks in Diagnosis of Incipient Consumption. E. F. Otis, Battle Creek.
154 Emergency Surgery. H. B. Garner, Traverse City.

153. Abstracted in The Journal, Oct. 9, 1909, p. 1220.

Journal of the Medical Society of New Jersey, Orange

March

155 The Present Status of Hypnotism. W. H. Hicks, Newark.
156 Cows' Milk and Infant Feeding. H. Chavanne, Salem.
157 Artificial Infant Feeding. F. F. Bowyer, Jersey City.
158 Personal Equation in Infant Feeding. A. MacAlister, Camden.
159 Infant Feeding not Generally Recognized. J. F. Bell, Englewood.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

March 19

1 *The Streptotrichoses and Tuberculosis. A. G. R. Foulerton.
2 Use of the X-Rays in Skin Diseases and other Affections. A. H. Pirie.
3 *Treatment of Labor in Contracted Pelves: With Special Reference to the Justifiability of Pubiotomy. G. F. Blacker.
4 The Circulatory System. H. Campbell.
5 *Further Evidence of the Homogeneity of the Resistance to the Implantation of Malignant New Growths. E. F. Bashford and B. R. G. Russell.
6 The Contrast in the Reactions to the Implantation of Cancer after the Inoculation of Living and Mechanical Disintegrated Cells. M. Halland.
7 *Chorioepithelioma of the Testicle. O. C. Gruner.
8 Crepitations Heard in Third Left Intercostal Space in Cases of Mitral Stenosis. C. W. Cunnington.
9 Hemorrhage Due to Erosion by Soft Chancres. J. Rae.

1. **Streptotrichoses and Tuberculosis.**—There is no doubt in Foulerton's mind but that at one stage of its growth the bacillus of Koch is represented by branching mycelial threads of the streptothrix type. And this being so, he says, the common "bacillary" forms represent persistent rod-segments of the streptothrix, which reproduce themselves under some conditions directly, and without the intervention of a mycelial stage; but from a morphologic point of view there is no essential difference, beyond such as may depend on relative rapidity of growth, between Koch's bacillus and a typical streptothrix, such as Eppinger's, when growing on solid media.

Speaking of the varieties of tuberculosis, Foulerton regards it as certain that in avian tuberculosis the parasite is ingested with food. While the food of poultry kept under domestic conditions is not confined to vegetable products, Foulerton has seen isolated cases of tuberculosis occurring in fowls under conditions such that the only possible sources of infection were either human beings or food in the shape of grass or grain. But the human parasite is probably incapable of infecting fowls; and, infection from other poultry being in these isolated cases practically impossible under the existing circumstances, vegetable food appeared to be the only possible source of infection remaining. With regard to tuberculosis of the ox, while it is quite certain that infection is often conveyed by dust infected from a previous case, it would appear equally certain that in many cases infection occurs through the mucous membrane of the intestinal tract and is conveyed with vegetable food. While this frequent association of acid-fast organisms with herbage is remarkable, it cannot be suggested that any such direct association can be traced for the parasite of human tuberculosis. Nevertheless, it is of interest to note that the human parasite may be not far removed on the scale of evolution from some species of streptothrix parasitic for herbage.

3. **Treatment of Labor in Contracted Pelves.**—Blacker believes that the right solution of the problem is this: In any case in which it is considered inadvisable to perform Cesarean section, or in which this operation is rejected by the patient, and in which the induction of premature labor has been followed by the birth of a still-born child on one or more occasions, the patient may be allowed to go to full term, and, if necessary, pubiotomy may then be performed. An additional advantage of this plan of treatment would be that in many cases the necessity for pubiotomy would not rise, since spontaneous delivery might occur, a result which is attended with the minimum of risk to both mother and child. It must be remembered that although it is quite true that in the average pregnant woman the operation of Cesarean section is an easy and safe one, yet pregnancy does occur from time to time in women in whom any abdominal section would be an extremely dangerous operation, and such a patient might, if it were necessary, prefer pubiotomy to the destruction of her living child.

If the patient is in labor when seen and the head fails to engage or is arrested at the brim, then, if moderate traction with high forceps fails, in place of the forcible delivery with forceps of the head through the brim (an operation which entails a fetal mortality of at least 40 per cent.) or the performance of version (which entails even a higher fetal mortality), Cesarean section should be performed; while if the case is considered unsuitable for the performance of late Cesarean section, then pubiotomy certainly may be substituted for craniotomy of the living child. Pubiotomy should, however, only be practiced if it is certain that the child's life has not been in any way imperiled, and in view of the serious complications which may follow it is not an operation suitable for private practice, and should only be performed in a hospital.

5. **Malignant New Growths.**—The authors' experiments seem to demonstrate that after inoculation of a given dose of mouse tumor into a rat there is produced between the sixth and ninth day an active immunity which leads to a rapid destruction of any mouse tumor cells subsequently introduced. Further, it can be inferred that the production of this active immunity contributes to terminating the transitory growth of mouse cancer cells in rats. The cessation of these growths is due largely to active immunity concomitantly induced and to other influences directly injurious to them. The immunity induced in the rat against mouse cancer is very different from the active resistance of a mouse to inoculation of tumor of its own species, for, as demonstrated in 1908, mouse tumor cells can live and divide for eight or ten days in a resistant mouse, but they are incapable of eliciting the stroma reaction necessary for their establishment as a fresh tumor.

7. **Chorioepithelioma of the Testicle.**—The patient, aged 25, had pain in the left testicle, which was found to be enlarged. Though the swelling was soft at first it had become hard and he had noticed little knobs on it. Examination of the testicle showed a hard swelling partly involving the organ, but mainly occupying the epididymis. The cord was not thickened and there were no adhesions between the swelling and the skin. Syphilis and tuberculosis were excluded, so that castration was performed. Recovery was uneventful. The character of the cells strongly recalls that of deciduoma malignum. Close examination reveals a similarity on the one hand to sarcoma cells and on the other to the cells of spheroidal-celled carcinoma, so that the tumor might be called sarco-carcinoma.

British Medical Journal, London

March 19

10 Gastric and Duodenal Ulcer. F. J. Smith.
11 Dysmenorrhea. R. A. Gibbons.
12 The Surgeon, the Patient, the Student, and the Nurse. W. Mills.
13 Carcinoma of the Kidney. K. Monsarrat.
14 Peritoneal Pseudomyxoma Originating from the Vermiform Appendix. W. Trotter.
15 Pelvic Hematoma of Ovarian Origin. T. Holmes.
16 *Case of Family Albuminuria. J. N. Fergusson.

16. **Family Albuminuria.**—For over 20 years Fergusson's patient had been passing large quantities of albumin in the urine, three grams per liter. Microscopic examination revealed no casts or corpuscles, and there was nothing to suggest renal trouble. The heart was normal in size, the sounds were normal, blood pressure was in the limits of the normal, and there was little or no arterial thickening. There had never at any

time been any edema of the eyelids or legs, or any other sign of renal disease. At many examinations Fergusson always found albumin present, and he thinks that he is justified in believing that it has been constantly present, at any rate since it was first detected in 1886, by the fact that, since then, the patient has frequently had the urine examined, always with a positive result, and that three insurance companies refused him on that ground between 1886 and 1889. The patient has maintained his usual high standard of health, and although he has always been thin and spare, he is very tough. The most remarkable feature of the case, however, is that all the members of the patient's family exhibit the same peculiarity. They are all perfectly well, and, considering the age the parents have attained (87 and 78 respectively), such a case as this should have an important bearing on the question of rejection or "loading" of candidates for life insurance.

Glasgow Medical Journal

March

17 Significance of Certain Changes in the Composition of the Urine. D. N. Paton.
18 *Acute Pneumonia and its Treatment. A. Napier.
19 Addison's Disease. R. B. Ness.

18. **Acute Pneumonia and Its Treatment.**—In 20 years Napier has had 460 cases of acute pneumonia. Of the 460 cases, 335 patients recovered and 125 died—a recovery rate of 72.82 per cent., and a death rate of 27.17 per cent. This includes absolutely every case, with no omissions whatsoever. If we deduct 18 patients who died within 12 hours after admission there remain 442 cases—335 recoveries and 107 deaths—a mortality of 24.20 per cent. and a recovery-rate of 75.79 per cent. If we similarly cut out those, 34 in number, who died within 24 hours after admission, there remain 426 patients—335 recoveries and 91 deaths—a death rate of 21.36 per cent. and a recovery rate of 78.63 per cent. Lastly, if, as is usually done with infirmary statistics, we drop out of account those patients, 49 in number, who died within 48 hours after admission, there remain 411 cases—335 recoveries and 76 deaths—a mortality of 18.49 per cent., and a recovery rate of 81.50 per cent. It may well be assumed, Napier says, that if a patient survives for 48 hours after admission he has become fairly under the influence of the treatment adopted, and his case serves as a fair test of the value of such treatment.

Two hundred and nine patients were males, 45.43 per cent., and 251 were females, 54.56 per cent. Of 460 cases, 209 were males, and the deaths among these numbered 68, a percentage of 32.53; the recoveries were 141, a percentage of 67.46. Of the total of 460 (excluding no case, however soon death occurred after admission), 251 were females of whom 194 recovered, 77.29 per cent., and 57 died, 22.70 per cent. These figures indicate that pneumonia is a much more deadly disease in men than in women. Of the 49 patients who died within 48 hours after admission, 31 were men and only 18 were women, and this, notwithstanding the fact above noted, that the male patients numbered only 209, as against 251 female.

The patient is kept absolutely in bed; he is fed hourly while he is awake, his diet during the febrile period consisting of fluids, such as milk and well-thickened beef-tea or chicken soup, about 4 fluidounces on each occasion, the milk being sometimes given in the form of curds. No poultice or other form of external treatment is used; no opiates or hypodermic injections of morphin. Pain, usually pleuritic, was found to be best relieved by the application of a firm binder, 4 or 5 inches broad, pinned round the lower ribs below the nipples. Napier cannot recall any cases in which he had occasion to order the administration of morphin hypodermically, or in which the firm binder failed to ease pain. In the way of medicines, Napier's sheet anchor has been a combination of chloral and digitalis, given every three, four or six hours; 7½ to 10 grains of chloral hydrate with 10 minims of the tincture or 1 or 2 drams of the infusion of digitalis. Strychnin he gives when heart failure seems to threaten. It should be given freely, if given at all. Oxygen also he has found of much value when cyanosis begins to be evident; it also has to be given lavishly if any good is to be expected from its use. He has used stimulants very sparingly—probably not at all in at least one-half of his cases.

British Journal of Children's Diseases, London

February

20 Cyclic or Recurrent Vomiting Associated with Hypertrophic Stenosis of the Pylorus. A. E. Russell.
21 Purpura Fulminans. J. D. Rolleston and T. McCririck.
22 Occurrence of Adenoids in Three of the London County Elementary Schools. M. Yearsley.
23 Spasmus Nutans with Nystagmus. J. B. Barrett.

Indian Medical Gazette, Calcutta

February

24 Circulatory Diseases in India. F. J. Drury.
25 Occurrence of an Epizoötic of Fowl Septicemia in Calcutta and Prophylactic Treatment of the Disease by Vaccine. G. C. Chatterjee.
26 Medicolegal Practice in the Mofussil. W. D. Sutherland.
27 Extraordinary Series of Outbreaks of Plague in Cape Colony, due to Case to Case Infection. E. N. Thornton.
28 *Ventrofixation of the Uterus: A Protest. R. H. H. Goheen.
29 *Death from Intraspinal Injection of Novocain and Strychnin. W. Gabbett.

28. **Ventrofixation of the Uterus.**—Goheen believes that this operation still has a useful place in gynecologic surgery. In cases of prolapse in old multipara, in which pregnancy is almost certainly not to be expected, ventrofixation of the uterus may be permissible, but in young women he regards it as unjustifiable and dangerous to correct malpositions of the uterus by a fixation to the abdominal wall.

29. **Death from Intraspinal Injection of Novocain and Strychnin.**—Gabbet's patient, aged 40, had a large elephantiasis of the scrotum, weighing 31 pounds. An injection of 3 c.c. of distilled water containing one milligram of strychnin hydrochlorid and one decigram of novocain was given between the eleventh and twelfth dorsal vertebræ. Onset of anesthesia was rapid and in 5 minutes had reached the level of the nipples. Ten minutes later it was noted to be 3 inches above the level of the nipples. The patient sat up for 1 minute after receiving the injections and then lay down with his head on a pillow.

About half an hour after receiving the injection, he complained of difficulty in breathing and attributed it to the weight of the tumor which was being turned up over the abdomen in order to complete the incision below. After lowering the tumor he still seemed to have difficulty in breathing, but as he attempted to vomit slightly, Gabbett considered that it was due to nausea and faintness and would pass off. At this stage the skin flaps had been reflected, penis and testicles enucleated, and everything was ready for the final severing of the pedicle. No undue amount of blood had been lost; indeed, the pulse showed no sign of shock. The patient at this stage stopped breathing. Artificial respiration was commenced at once and it was noticed that the arms were rigid from spasm, so much so that at first they could only be moved with difficulty. The most energetic attempts failed to resuscitate the patient. There was no doubt that death was due to respiratory failure, whether as a result of spasm from the action of the strychnin on the medulla or from partial paralysis due to the action of the novocain Gabbett says is difficult to determine. Judging from the stiffness of the arms, he would attribute it to the former cause.

Annales des Maladies des Org. Génito-urinaires, Paris

February, XXVIII, pp. 289-384

30 *Resistance of Animals to Destruction of the Kidneys. F. Putzu.

30. **Resistance of Animals to Destruction of the Kidneys.**—Putzu reports experiments on dogs and rabbits, the outcome demonstrating that the animals may survive even when part of the remaining kidney is removed after a nephrectomy. The limit of tolerance seems to be about three-fourths of the total supply of kidney substance. Removal of more than this is fatal sooner or later.

Annales de Médecine et Chirurgie Infantiles, Paris

February 15, XIV, No. 4, pp. 109-142

31 *Infantile Quadriplegia with Pneumococcus Infection of the Meninges. E. Gaujoux and F. Maillet.
32 Latent Tuberculous Peritonitis in Ten-Months Old Infant. L. Tixier and J. Troisier.
33 Prognosis of Appendicitic Abscess. M. Savariaud.

31. **Acute Infantile Paralysis from Pneumococcus Infection of the Meninges.**—Gaujoux and Maillet report a case of infantile quadriplegia and pneumococcus infection of the meninges, in which the total flaccid muscular paralysis, the absence of tendon phenomena and the abnormal movability of the joints suggested Oppenheim's congenital muscular atony

in some respects, but the sudden onset of the symptoms and their retrogression exclude this diagnosis. The infection of the meninges demands repeated lumbar puncture and modifying injections, possibly of antimicrobian serum. For this, he says, physical, chemical, cytologic and bacteriologic tests may be necessary in each case.

Archives des Maladies de l'App. Digestif, Paris

February, IV, No. 2, pp. 49-112

34 Spontaneous Chronic Ulcer in Six Dogs after "Isolation" of the Stomach. (Étude de pathologie comparée.) F. Moutier.
35 *Experimental Research on Pathogenesis of Gastric Ulcer. A. Bauer.

35. **Pathogenesis of Gastric Ulcer.**—Bauer has been repeating the experiments of F. B. Turck as reported in The Journal, June 9, 1906, but he states that his results and his conclusions from the findings seem to contradict those of Turck.

Bulletin de l'Académie de Médecine, Paris

February 22, LXXIII, No. 7, pp. 185-212

36 Coloring Matters Used in Articles of Food. Béhal and committee.
37 *Successful Treatment of Epithelioma of the Face with Pure Formalin. H. Hallopeau and P. Fumouze.

37. **Formalin in Treatment of Epithelioma of the Face.**—In the 2 cases reported, the liquor formaldehydi was applied on a wad of cotton after the ulceration had been softened with moist dressings. The application was repeated four days later and after the thick eschar had been thrown off the lesion healed, leaving a smooth scar. There was no reaction in the surrounding tissues. The method is now being applied in a case of verrucous lupus with, the authors state, promising results to date.

Archives de Médecine des Enfants, Paris

March, XIII, No. 3, pp. 161-240

38 *Epidemic Cerebrospinal Meningitis. J. Comby.
39 Infantile Pseudoleucemic Anemia. (Maladie de Jaksch.) D. Kiroff.

38. **Epidemic Cerebrospinal Meningitis.**—Comby relates his experiences with 31 cases of cerebrospinal meningitis in children, including 8 young infants; 5 were between 1 and 2 years old, 9 between 2 and 4, and the others between 5 and 15. The symptoms and course varied widely but serotherapy gave excellent results; he injected the serum through the same needle puncture after withdrawal of cerebrospinal fluid. Hot baths at 38 C. (100.4 F.), repeated three or four times a day, proved a useful adjuvant, with ice to the head and sedatives.

Grèce Médicale, Syra, Greece

XI, Nos. 15-16, pp. 33-36. Last indexed August 28, 1909, p. 747

40 Anemia of Renal Origin. G. D. Sykiotis.
41 *Familial Angiocholitic Cholemia. P. N. Divaris.

Nos. 17-18, pp. 37-40

42 Oriental Sore in Greece. (Leishmanioses en Grèce.) J. P. Cardamatis. Commenced in No. 13.
43 The Condition Preceding Arteriosclerosis. (La présclérose.) G. D. Sykiotis.
44 *Malaria in Children. (La malaria infantile.) J. P. Cardamatis.

XII, Nos. 1-2, pp. 1-4

45 Influenza Affecting Almost Exclusively the Nervous System. (Formes nerveuses de la grippe.) P. N. Divaris.
46 *Experimental Research on Transplantation of Testicles, Kidneys, Spleen and Eyes. (Transplantation des testicules.) S. Zervos. Commenced in No. 19.

41. **Familial Angiocholitic Cholemia.**—Divaris refers to the presence of bile in the blood as liable to occur in several members of a family, following inflammation of the gall-bladder.
syndrome includes hyperchlorhydria and a special form
would appe en uncontrollable diarrhea. Among the secondary
occurs thro ns are a tendency to hemorrhoids, to mucomem-
and is conv enteritis and to appendicitis. The abdominal wall
association relaxed, the intestines distended, the spleen enlarged,
it cannot b eys irritated as evidenced by intermittent or ortho-
be traced fo lbuminuria; pruritus and urticaria are frequent and
less, it is of also be a tendency to gastric hemorrhage, to head-
not far remov ring bronchitis, pleurisy, rheumatism, epistaxis and
streptoc p affections. The temperature is highest in the
3. Treatment d the patient generally develops neurasthenia or
lieves that the nced melancholia. Some cases are entirely free
case in which it ese secondary symptoms. He summarizes the

treatment as bed rest, exclusive skimmed milk diet—three liters in the twenty-four hours—which aids in throwing off the bile pigments in excess in the blood, abstention from fats as they fatigue the liver cells, and a glass of mineral water before breakfast.

44. **Malaria in Children.**—Cardamatis has noticed that infants less than three months old in Greece are rarely affected with malaria and all seem to be comparatively immune up to the end of the first year. But between the ages of 2 and 7 children are particularly liable to acquire malaria, especially during their third year. The malaria in the mother does not seem to influence the general condition of the fetus in any way; it seems probable that certain antibodies develop in the fetal blood or in the fetal portion of the placenta which injure the malaria germs and destroy them as they enter the placenta. In both nurslings and older children he has demonstrated an organic resistance to the toxic products of the hematozoa, this natural immunity, however, varying widely in degree. A natural immunity seems thus to occur in Greece similar to that observed among the blacks in Africa. This immunity has been demonstrated even in children who most certainly have never had malaria and it thus differs from the immunity described by Koch, Plehn and v. Pirquet, and is also entirely different from that observed by Celli in the Roman campagna. Malaria in both children and adults in Greece seems to assume predominantly the tertian estivo-autumnal type. Children are more apt to develop the chronic than the acute form.

46. **Experimental Transplantation of Testicles, Spleen and Eyes.**—Zervos reports over 412 different experiments in this line with rabbits, monkeys, dogs, cats and guinea-pigs, this experience showing that the testicle from one animal can be transplanted into another of the same species and even of another species, and replace the normal testicle. The transplanted testicle may continue its functioning and produce normal spermatic fluid, but finally is absorbed by the end of a year. The implantation of several testicles induced priapism in the male animals and nymphomania in the females, persisting for about a year, by which time the organs in their subcutaneous bed had been completely absorbed. During the process of absorption there is intense stimulation of the genital apparatus. Zervos states that the practice of castration is still so common in the East that it is a most important medical problem how to aid the eunuchs who implore the physician for some means of relief from their condition. He is convinced that the results of his experiments open a promising outlook in this line, and also for the treatment of impotency. He took some of the animals to Budapest to demonstrate his method and the results before the recent international medical congress. Some were dissected by Waldeyer at Berlin and he cites the latter's report. He also announces that he is soon to make another trip to Europe to demonstrate in the medical centers a number of his engrafted animals, his methods, results, etc. He offers to present his material before any scientific society or university and submit the animals to every possible test and means of control. The transplanted testicles, kidneys and eyes resumed functional activity when derived from a young animal; those from older animals do not display this power of continuance of functioning. Kidneys and spleens are absorbed more rapidly than testicles. He is now engaged in research to determine whether other vital organs, lungs, liver, uterus, heart, etc., can be replaced by others transplanted from another individual, and remarks that the outlook already is promising.

Lyon Chirurgical, Lyons

March, III, No. 3, pp. 257-352

47 Leucoplasia in the Bladder Probably of Neoplastic Origin. (Leucoplasie vésicale.) Rochet and Murard.
48 Fracture of the Malleolus. III. (Fractures malléolaires recentes.) E. Destot. Continued.

Lyon Médical, Lyons

February 20, XLII, No. 8, pp. 393-440

49 *Tuberculous Paroxysmal Tachycardia and Arrhythmia. J. Bertier.

February 27, No. 9, pp. 441-492

50 *Actinomycosis of Tissue Around the Kidney. (Phlegmon périnéphrétique de nature actinomycosique.) Leclerc-Montmoyen.

49. **Tuberculous Paroxysmal Tachycardia.**—Bertier has encountered two new cases since the one he reported in 1905 in which paroxysmal tachycardia was observed during the course of pulmonary tuberculosis. Nothing could be discovered during life or at autopsy to explain the attacks except the tuberculosis. He has found two similar cases on record, and adds a report of a case in which paroxysmal arrhythmia, evidently a latent tachycardia, was accompanied by gastric disturbances and vomiting. The rapid heart action observed was in every respect like that of the so-called essential tachycardia. In all the cases the tachycardia was arrested at once by vomiting induced by ipecac. In every case of tachycardia, he says, search should be made for possible underlying tuberculous infection if such is not already clinically evident. In most of the cases mentioned there were advanced lesions in the lungs, but one patient was in an early stage of pulmonary tuberculosis.

50. **Actinomycotic Phlegmon near the Kidney.**—In the case described the patient was a butcher, 40 years old, who refused to permit evacuation of the abscess until it had assumed very large proportions. For a long time the diagnosis had been pleurisy without effusion. The wound did not heal properly after the abscess had been opened, and the general condition grew rapidly worse. The pus was examined under the microscope 16 days after the operation, and on the discovery of the ray fungus potassium iodid was given. In less than three days the whole syndrome was arrested and complete recovery soon followed. Another tumor developed later in the hypochondrium, but retrogressed on resumption of the potassium iodid.

Obstétrique, Paris

February, III, N. S., No. 2, pp. 105-200

51 The Muscles and Ligaments Connected with the Coccyx. (L'appareil musculo-ligamenteux du coccyx.) L. Devraigne and P. Descomps.
52 *Treatment of Genital Tuberculosis. A. H. M. J. van Rooy.
53 *Treatment of Extrauterine Pregnancy. (Traitement de la grossesse extra-utérine.) E. Essen-Möller.

52. **Tuberculosis of Genital Apparatus.**—Van Rooy reviews his experience with several cases of severe tuberculous processes in the ovary or throughout the genital apparatus, the results confirming the advantage of operation. Even if surgery does not cure completely, it relieves and permits long survival. If the patient does not improve under the ordinary measures, he advises hysterectomy. In one such case the debility of the patient and an evident latent pulmonary process did not deter him from doing abdominal hysterectomy. The woman rapidly convalesced and the general condition improved beyond anticipation. It is surprising, he remarks, how well a major operation is borne by such patients.

53. **Treatment of Extrauterine Pregnancy.**—Essen-Möller has operated in 47 out of 48 cases of extrauterine pregnancy. All the patients recovered. In the one non-operative case the patient was confined to her bed for six months and the hematocele was not entirely absorbed until after two years. In another case he did not operate until the non-absorption of the hematocele after nine months compelled it. In the operative cases the patients were dismissed in three weeks. His experience is all in favor of prompt operation.

Presse Médicale, Paris

March 9, XVIII, No. 20, pp. 169-176

54 *Pseudotumors of the Brain and Serous Meningitis in the Ventricles. (Pseudo-tumeurs cérébrales et méningite séreuse ventriculaire.) F. Raymond.

March 12, No. 21, pp. 177-184

55 Indications and Technic for Bronchoesophagoscopy. M. Guisez.
56 Syphilitic Chronic Atrophy of the Aorta. M. Letulle.
57 Spontaneous and Experimental Autoinoculation of Syphilitic Chancres. M. Pinard.

54. **Pseudotumors in the Brain.**—Raymond describes two cases, dating from 1900, to illustrate the importance of an early diagnosis as prompt mercurial treatment, even in the absence of syphilis, may have a beneficial action in serous meningitis. If this fails, decompressive measures may aid in the spontaneous cure or may cure alone. The sudden onset of the meningeal and optic symptoms is characteristic. In his first case the patient had an inherited syphilitic taint; at the age of 23 a subacute meningeal syndrome developed with amaurosis, but very slowly and gradually all the symptoms subsided and by the end of three or four years there was none left except that vision was never recovered in one eye. Exophthalmic goiter developed later. In the second case also the syndrome simulated a brain tumor except that the symptoms gradually subsided in the course of two years, except the amaurosis, which still persists.

Archiv für Kinderheilkunde, Stuttgart

LII, Nos. 4-6, pp. 241-484. Last indexed January 22, p. 327

58 *Pediatrics in Medical Curriculum in Germany. (Die Kinderheilkunde im Universitätsunterricht Deutschlands.) E. Feer.
59 * [illegible] c—Albuminuria. R. Fischl.
60 [illegible] gitis; Clinical Observations and Serum [illegible] York. L. Fischer (New York).
61 [illegible] Developing Nipple and Drawing Milk. [illegible]
62 * [illegible] in Young Children. [illegible] im Säuglings- und [illegible]
63 [illegible] Study of the *Streptococcus enteritidis*. [illegible]

58. **Pediatrics in the Medical Curriculum in Germany.**—Feer comments on the growing interest in pediatrics, not only in medical circles but in official headquarters. One of the signs of the times is that societies for internal medicine in Vienna and Berlin have recently added pediatrics to their official title. He urges that every medical college should have a hospital for children's diseases and an infant department connected with it, a special dispensary for children, all in charge of a professor who is a specialist in pediatrics. If this is not possible, there should at least be a special infants' ward, with at least 20 beds. He also urges examination in pediatrics by a specialist in the examination for license to practice.

59. **Orthostatic Albuminuria.**—Fischl expatiates on the increasing acceptance of the mechanical theory of orthostatic albuminuria, the pressure from lordosis being responsible for the development of the albuminuria. He regards this mechanical explanation as great progress, but adds that besides the lordosis there must be some predisposition on the part of the kidney or the albuminuria does not follow. He suggests as a better term, "lordotic albuminuria in the predisposed"—*Lordotische Prädispositionsalbuminurie.* Treatment, he states, should be based on this mechanical conception and everything avoided that is liable to induce lordosis, long standing or much bending of the spine. A correcting corset may be useful.

62. **Tuberculin Treatment in Infants.**—Röhmer reports three cases of tuberculous infants in whom reparatory proliferation of connective tissue seemed to have been induced by systematic tuberculin treatment. Such reparatory processes are rare in children.

Archiv für klinische Chirurgie, Berlin

XCI, No. 4, pp. 803-1059. Last indexed March 5 and 19, pp. 824 and 1012

64 *Ileus in Children. (Der Darmverschluss der Kinder.) H. Alapy.
65 Transplantation of Muscles for Defects in Abdominal Wall. (Ueber Muskeltransplantation bei Defecten der Bauchdecken.) I. I. Grekow.
66 By-Injuries and Complications in Operating for Rectal Cancer. (Nebenverletzungen und Complicationen bei der Operation des Mastdarmkrebses.) W. Kohn.
67 *Aseptic Stomach and Intestinal Operations. (Ueber aseptische Magen- und Darmoperationen.) L. Moszkowicz.
68 *Recovery from Cerebrospinal Meningitis after Trephining the Skull. (Fall von Cerebrospinalmeningitis, durch Trepanation des Schädels geheilt.) E. Tscherniachowski.
69 Infection of Firearm Wounds. (Zur Frage der Infection der Schussverletzungen.) W. v. Reyher.
70 Diagnosis and Treatment of Carcinoma of the Large Intestine. T. Wette.
71 Cecal Tuberculosis. Id.
72 *Postoperative Thromboembolism. (Studien über Thrombo-Embolie, insbesondere nach Operationen.) G. Kelling.

64. **Ileus in Children.**—Alapy has encountered 45 cases of ileus in children from a few weeks to 14 years old. In the older children, conditions and syndrome resemble those in adults but in the younger ones more may be learned from palpation than in adults. Megacolon and invagination are easily recognized and occur almost exclusively in children. There were only 5 cases which did not belong in either one or the other of these categories. Ileus for which preceding

appendicitis was responsible was observed in ten different forms, but the invagination syndrome is always alike, being notable for the absence of rigidity of the abdominal walls. Prompt operation, doing as little harm as possible, is often indispensable; enterostomy should be done more readily, perhaps, than in case of adults. This is not a mere palliative operation; with only 2 exceptions the children treated by enterostomy were cured. Resection is rarely required for invagination. If it is difficult to reduce, the trouble is not on account of adhesions but of defective technic. He succeeded in reducing the invagination in every case, even with ileocecal invagination; solid adhesions were practically never encountered. In many forms of occlusion of the intestine in children medical measures alone may be given a trial, but only for a short time. The ileus must be speedily corrected as children have less resisting power than adults. The particulars of his 45 cases are given in detail. With strangulation ileus, an opening above does not restore the circulation in the parts below. But enterotomy, allowing the escape of gases and feces, and then suturing the incision at once, may give great relief and turn the scale in favor of recovery. Even with supposed strangulation ileus an enterostomy may cure as there may have been a blunder in diagnosing; the child *should be given the benefit of the chance. In one such case* the course of the case later first revealed that the trouble had been merely obstruction from adhesions instead of the assumed strangulation. The permeability of the intestines became spontaneously restored after enterostomy in all the cases of ileus from adhesions, without even the necessity for separation of the adhesions. The ileus in these cases is generally the result of some gross error in diet, and the enterostomy permits the removal of the articles causing the mischief.

67. **Aseptic Operations on Stomach and Intestines.**—Moszkowicz gives an illustrated description of his method of suturing the stomach or intestines before opening the lumen, and also adds the details of 37 operations, the results commending, he says, the advantages of this technic.

68. **Cerebrospinal Meningitis Cured by Trephining.**—In the case reported, a student presented a syndrome diagnosed as suppurative streptococcus meningitis of otitic origin. The mastoid process was incised but no focus found, and the skull was trephined in the posterior cranial fossa to permit of drainage. The dura was found congested and taut; three punctures released about 10 c.c. of blood-stained fluid. The needle probably entered the lateral ventricle to allow so much fluid to escape. The dura was incised and tampons introduced between it and the pia. The temperature dropped the same evening and recovery was soon complete. The disease was evidently a sporadic case of cerebrospinal meningitis, the meningococcus having found its way to the meninges through the existing chronic otitis media.

72. **Thromboembolism.**—Kelling's experimental research has confirmed the fact that thrombi may develop in consequence of stasis, of increased secretion from changes in the composition of the blood, or from infection. Prophylaxis should therefore strive to avoid compression of veins and thus avert stasis, with measures to combat the increased tendency of the blood to clot, and ensure asepsis. The persons most liable to thrombosis seem to be those who have lost much blood or are cachectic from cancer or tuberculosis, patients with infectious processes or heart disease and the corpulent inclined to sedentary habits. Digitalis may tide some patients past the danger point. In patients with heart disturbances, respiratory exercises may help to ward off danger. Even with existing infectious processes, much can be done to avoid thrombosis, care being exercised to refrain from any injury or even manipulation of the veins, the incision being made at a point where large veins are not encountered. By having the patient stand up and strain, the superficial veins become prominent and they can be marked so that the incision can avoid them. It has been his experience that by avoiding the superficial veins the deep ones also escape. If a large vein has to be severed, he ligates before cutting, and cuts the vein as far from the actual field of operation as possible, avoiding dead spaces and everything tending to compress the vein. Compression from tamponing must have an injurious influence in this line, as also any tendency to tympany which *in turn compresses* the veins. Special care is necessary in removing existing compression from a vein, as in evacuating an abscess that has been compressing the adjacent organs. It is well to tap the patient before undertaking omentopexy to ensure that the circulation in the region is working well before doing the Talma operation. Patients who have just been operated on should not be given milk, nor those with internal diseases with a tendency to thrombosis, such as typhoid; raw milk in particular, he says, should be avoided as its lime salts promote coagulation. *Copious* water drinking does not ward off thrombosis; he lost two patients from fatal embolism notwithstanding that they had been drinking very freely. Better results may be anticipated from continuous irrigation of the rectum with salt solution, which promotes circulation in the pelvic veins. Kelling ascribes to Ries (The Journal, Aug. 19, 1899, page 454), the suggestion that thrombosis may be prevented by getting the patients up early. This certainly tends to prevent stasis, but it is not an infallible preventive of embolism; he lost one patient from embolism who was allowed to get up early after an operation for incarcerated inguinal hernia. He regards frequent change of the position in bed as more important for prophylaxis than letting the patients get up soon. *Special care must be taken that the buttocks do not sink* deep into the mattress; it may be advisable to raise the foot of the bed when danger from pelvic thrombi is anticipated. He advises changing from the back to the side and even to the ventral decubitus at times. Massage of the legs four or five times a day is useful, he believes, to prevent thrombosis in the veins of the legs, but femoral thrombosis developed not only in convalescence from operations but also in typhoid in some of his cases, although the legs had been systematically massaged. There is no reliable premonitory sign of impending embolism but the "step pulse," *Treppenpuls*, in which the pulse increases while the temperature persists unchanged or the pulse remains high although the temperature has declined, is significant, as also slight sensations of dyspnea and pain in the side warning of embolism. In all such cases the patients should be kept unconditionally in bed for three weeks and the veins constantly supervised. He noticed that in two of his six cases of fatal embolism there was some venous bleeding in the granulations when the dressings were changed, demonstrating the stasis in the veins. Pains in the veins in the legs are also a sign that they are becoming unduly distended. Thrombosis in the veins in the small pelvis can be palpated through the vagina. An obstructing thrombus in the hypogastric vein sometimes causes a swelling at the nates; if bilateral, the genitals may swell. With thrombosis in the azygos vein edema may develop in the corresponding region in the back. The aim should be to discover new means for detecting incipient thrombosis and then if necessary to remove the thrombus from the periphery.

Deutsches Archiv für klinische Medizin, Leipsic

XCVIII, Nos. 4-6, pp. 301-614. Last indexed January 29, p. 418

73 Mountain Climate and Blood Production. (Höhenklima und Blutbildung.) E. Masing and P. Morawitz.
74 Action of Injections of Serum on Eosinophiles and Mast Cells in Human and Animal Blood. H. Schlecht.
75 The Adams-Stokes Syndrome and the Atrioventricular Bundle of His. G. Herzheimer and H. Kohl.
76 The Blood in Pulmonary Tuberculosis. (Blutbefunde bei Lungentuberkulose.) L. Steffen.
77 The Urine Sediment in Athletes and in Nephritis. (Untersuchungen des Urinsedimentes von Sportsleuten und Nephritikern.) H. B. Christensen.
78 Production and Action of Antityphoid Serum. (Gewinnung und Wirkung von Typhusheilserum.) H. Lüdke.
79 *Lines to Aid in Topography of the Anterior Thorax. (Ueber die vorderen thorakalen Richtlinien.) P. Hampeln.
80 Absorption and Biologic Behavior of Different Kinds of Sugar in the Large Intestine. (Die Resorption und das biologische Verhalten der verschiedenen Zuckerarten im Dickdarme.) A. v. *Halasz.*
81 *Method for Determining Pressure in Superficial Veins. (Ueber eine Methode, beim Menschen den Druck in oberflächlichen Venen exakt zu bestimmen.) F. Moritz and D. v. Tabora.
82 Mode of Elimination of Albumin after Brief Ligation of the Renal Vessels. (Ueber den Ausscheidungsort des Eiweisses bei kurzdauernden Gefässligaturen der Niere.) W. Telemann.
83 Registration of Heart Sounds and Murmurs. (Registrierungen von Herztönen und Herzgeräuschen beim Menschen.) G. Joachim and O. Weiss.
84 Pathology of Nuclein Metabolism. (Zur Pathologie des Nucleinstoffwechsels.) H. Rotky.

85 Determination of Histidin, Arginin and Lysin in the Autolysate of Pneumonic Lungs. G. Boehm.
86 Occurrence of Cleavage Products of Nucleinic Acid in the Autolysate of the Pneumonic Lung. (Auftreten von Spaltungsprodukten der Nucleinsäure bei der Autolyse der pneumonischen Lunge.) M. M[illegible]
87 *Finger-Nail Palpation of Artery
der Arterienwand.) J. K. A.
88 Ultimate Outcome of Case of Pec[illegible]
(Nachtrag zu Band LXXXIV, 1.) B. Naunyn.
89 Comparison of Gas Content of Arterial and Venous Blood as Functional Heart Test. (Ueber Schlagvolum und Herzarbeit des Menschen.) J. Plesch.

79. **Lines for Topography of the Chest.**—Hampeln urges the discarding of the terms mammary line, axillary, etc., as the anatomic conditions vary so widely in different persons. He suggests as more reliable and exact the use of the vertical median line through the sternum and a horizontal line through the base of the ensiform process. Measurements from these, he declares, are much more reliable for comparison.

81. **Method of Determining the Pressure in Superficial Veins.**—This article gives an illustrated description of a method by which communication is established through a cannula between a manometer and the blood in the median vein. Moritz and Tabora have applied this phlebotonometer about 300 times during the last eight months and on 100 patients, and describe the findings in normal and pathologic conditions. In some cases they kept up the examination for over an hour; they regard the technic as entirely harmless with ordinary precautions.

87. **Finger-Nail Palpation of Artery Walls.**—Wertheim-Salomonson has found that when the artery is palpated not with the pulpa of the finger but with the finger nail, perpendicular to the surface of the skin, it is possible to feel the artery wall alone; the contents of the vessels and the pulse are not felt with this technic, but the wall is palpated as distinctly as if the artery were dissected out. The wall is felt even in small children almost as well as in adults and with a little practice it is soon easy to tell whether the wall is thickened or not. We feel the little hill over which the finger-nail glides, thus estimating the diameter of the artery and the size of the wall when the current is shut off and other data can thus be readily learned. The entire innervation of the nail bed is called into play. A hard background is necessary for the finger-nail palpation to be most instructive. It is proving useful also for direct examination of nerves.

Deutsche medizinische Wochenschrift, Berlin

March 10, XXXVI, No. 10, pp. 441-488

90 * . Bäumler. Commenced in No. 9.
91 * and Treatment of Brain Tumors. . Bychowski.
92 *Tuberculous Meningitis in the Elderly. J. Jaquet.
93 *Hysterical and Spastic Intestinal Occlusion. (Hysterischer und spastischer Darmverschluss.) O. Nordmann.
94 *Diagnostic Tests of Kidney Functioning. (Zur funktionellen Nierendiagnostik.) J. Vogel.
95 Recovery after Severe Stab Wound of Heart. (Stichwunde des Herzens.) L. Renner.
96 * philis, and Prophylaxis. (Fall von igleich ein Beitrag zur Lebensdauer O. Scheuer.
97 evi. (Zur Strahlenbehandlung der roten Muttermale.) H. E. Schmidt.
98 Drug Eruptions. (Arzneiexantheme.) K. Bendix.
99 Authentic Works of Hippocrates. (Echte Hippokratesschriften.) H. Schöne.

90. **Treatment of Uremia.**—Bäumler emphasizes the difficulty of differentiating the true cause of the disturbance when the patient is first seen after the onset of coma; the history of preceding scarlet fever, diphtheria or pregnancy and the existence of a tendency to edema or enlargement of the heart or albuminuria may give the clue. Even in a person known to have a chronic kidney disease, a sudden attack may be due to uremic intoxication or to apoplexy or other causes. The trouble in uremia is probably due to the action of various poisons and their effect on the most diverse organs and tissues. He warns against saline infusions when there is reason to suspect kidney derangement. In chronic kidney disease the patient should be under the constant supervision of his family physician; the specialist may give good advice but the patient may misunderstand and misapply it, so that continual oversight by the family physician is indispensable for prevention and postponement of exacerbations and mishaps. It is especially important to keep the skin working well by systematic warm baths. Douches and other sudden powerful measures are unadvisable. If there are warning signs of uremia, such as muscular twitching, adhesion and drowsiness, even the milder sweating measures may prove disastrous. Many disturbances in the circulation in nephritis are not pathologic but are merely the effort of the circulatory apparatus to maintain the compensation. In uremic poisoning, as also in diabetics, the tissues become less resistant and more susceptible to infection. Hence it is especially important to be on the lookout to prevent intertrigo or decubitus, and to insist on the patient's breathing through the nose and keeping the mouth shut during sleep.

91. **General Symptomatology of Brain Tumors.**—Bychowski found headache one of the most frequent complaints in patients with brain tumors, noticeable in that it became more intense when the patient suddenly changed his position or made a rapid movement with his head or these changes of position first elicited the headache. The lack of or subsidence of headache, however, is no evidence against the existence of a brain tumor. Slow, high tension pulse and absence of the tendon reflexes were occasionally found as manifestations of the high pressure in the brain. Another important sign is the change in the electric conductibility of the skull in case of a brain tumor. In one case this sign contradicted the other local symptoms but the operation confirmed the precision of the electric findings. The article is based on comparison of the clinical history with the autopsy findings in a number of cases in Warsaw. Many of the patients presented disturbances in the sexual sphere, arrest of menstruation, impotency, sexual infantilism with hypophysis tumors, and precocious sexual development with tumors of the pineal gland. Careful review of the history, examination of the fundus of the eye and analysis of the different symptoms will almost always differentiate brain tumor from other lesions except from hydrocephalus and serous meningitis. An acute onset with rising temperature and frequent fluctuation in the intensity of the clinical picture suggest rather the latter affections, while a constantly progressive clinical picture speaks more for a true tumor although the latter may be accompanied by hydrocephalus with fluctuation in the symptoms due to the latter. If mercury is given a trial it must be only under the control of an ophthalmologist, especially if the fundus of the eye is no longer normal. If the stasis in choked disc increases and vision continues to diminish, mercurial treatment should be suspended at once. He bases this warning on several mishaps in such cases in which absolute blindness developed under mercurial treatment. This occurred even in one case in which the disease was evidently merely a serous meningitis. One patient with a tumor in the cerebello-pontine recess lost vision in one eye during a course of specific treatment. A second course was instituted a few months later during which the sight in the other eye also was lost. The mercurial treatment not only wastes time, he asserts, but also reduces the patients' resisting power so that they are unable to bear the necessary operation later. Lumbar puncture is seldom necessary with brain tumors, and if done not more than 15 or 20 c.c. of fluid should be withdrawn. Trephining gives better results than is generally recognized, and he is convinced that the progress of surgery will reduce its dangers still more.

92. **Tuberculous Meningitis in the Elderly.**—Jaquet has encountered 9 cases of tuberculous meningitis in patients between 17 and 37 years old and 7 others between 41 and 68. In the latter group, the trouble was more a tuberculous basal meningitis. Stupor was the one symptom common to all, rapidly leading to unconsciousness and complete cerebral paralysis. Vomiting did not occur in most of the cases and headache in only 2; the abdomen was not retracted but rather inclined to tympany. Only 3 of the patients presented rigidity of the back of the neck and Kernig's sign was apparent in only a few, as also the characteristic cerebral pulse. The pupil symptoms were merely a slight sluggishness, with myosis in one case and transient strabismus in another. In 3 cases there was retention of urine, incontinence in another. The meningitic syndrome was the termination of pulmonary tuberculosis and the patients succumbed in from 5 to 20 days after the first meningeal symptoms. He is convinced that terminal tuberculous meningitis has escaped recognition in many cases.

93. **Hysterical and Spastic Intestinal Stenosis.**—Nordmann reports three cases; in one the trouble was hysterical ileus, in another spastic ileus, both patients recovering, but in the third case a long stretch of the lower segment of the ileum was contracted and the resulting disturbances proved fatal. This case shows that the paralysis of the intestines which may accompany the spasmodic contraction may prove fatal but otherwise when a nervous affection is the cause of the spasm the prognosis is not unfavorable. Treatment of the nervous contraction should be conservative so long as the general condition remains good. If the patient becomes worse, enterostomy is indicated. On suspicion of ileus from spasmodic muscular contraction the patient should be taken at once to a hospital for constant supervision.

94. **Functional Kidney Tests.**—Vogel follows palpation, percussion and chemical and bacteriologic examination of the urine with cystoscopy and this with injection of indigocarmin. The phloridzin test is then applied and the freezing point of urine and blood determined. If the findings with the latter are repeatedly abnormal he advises against an operation. The final test is the combination of the indigocarmin with catheterization of the ureters.

96. **Prophylaxis of Syphilis Insontium.**—Scheuer reports a classical example of syphilis in the innocent in which a married woman of about 40 with four children, the entire family healthy, suddenly developed a typical syphilitic chancre on the labium majus. Infection was traced to a housemaid who had used her mistress' bath sponge during the latter's absence, the housemaid having secreting papules on the genitals. The interval between this use of the sponge and the mistress' bath later was an hour and a half. Scheuer instituted research to determine how long the spirochetes retain their vitality on a wet sponge and found that they were still motile after two hours when examined in the ultramicroscope. On the other hand, he found that the spirochetes entirely lost their motility in an hour on dry substances, especially on a dried sponge. This fact that spirochetes retain their vitality over two hours in moist media explains the relative frequency of extragenital infection and also suggests prophylactic precautions. He cites a number of other typical cases of syphilis in the innocent which confirm the special danger from wet sponges, wet glasses, etc.

Medizinische Klinik, Berlin

March 6, VI, No. 10, pp. 371-410

100 Hemorrhagic Nephritis with Chronic Ulcerative Endocarditis. (Embolische nichteiterige Herdnephritis.) M. Löhlein.
101 Advantages of Combination of Anesthetics. (Zur kombinierten Narkose.) Otto.
102 Wrong Interpretation of Roentgen-Ray Findings with Concrements in Urinary Passages. (Irrtümer der Röntgendiagnostik bei Konkrementen der Harnwege.) M. Roth.
103 Value of Tuberculin in Treatment of Pulmonary Tuberculosis. F. Schultze and von Starck.
104 *Physical Measures in Treatment of Sciatica. (Die physikalische Behandlung der Ischias.) A. Fürstenberg.
105 *Experimental Production of "Goiter Heart." (Zum Kropfherz.) E. Bircher.

104. **Treatment of Sciatica.**—This communication issues from the official hydrotherapeutic institute connected with the university of Berlin and states that a complete cure or material improvement was realized in 85 per cent. of cases of sciatica. The course of treatment averaged from 6 to 8 weeks, with 4 weeks for the milder cases. The hydrotherapeutic measures strengthen the patients and render them more resistant to injurious temperature influences and chilling. Hydrotherapy or injection of fluid to detach the nerves from adhesions is the most effectual treatment in sciatica, and one may succeed where the other has failed. The article is based on 150 new cases in the last few years, all given ambulant treatment; this series follows a former one which included 114 cases.

105. **Experimental Production of "Goiter Heart."**—Bircher's report of the experimental production of goiter was mentioned in The Journal, March 26, 1910, page 1094. He here relates that the heart in the animals with induced goiter presented the anomalies common with goiter in man. It seems evident that the injurious influence causing the goiter has at the same time a direct injurious influence on the heart. The cloudy swelling and fatty degeneration in some of the animals confirm the assumption of a toxic chemical injury. Exophthalmic goiter is rather frequent, he says; in the rare cases of goiter found in places where goiter is not endemic, while in the endemic foci the Basedow syndrome is extremely rare. Only 2 mild cases were discovered in a group of 400 goiter patients in his district in Switzerland.

Münchener medizinische Wochenschrift

March 1, LVII, No. 9, pp. 442-504

106 *History of the Munich Surgical Institute for Army Surgeons. (Geschichte des Operationsskurses für Militarärzte.) Lei-
107 * [illegible] I. (Wandlungen und den heutigen Stand [illegible]) v. Vogl.
108 *Operability of Tumors in Pleura and Lungs. K. Seydel.
109 Training for Disinfection Service in the Army. (Ausbildung von Desinfektoren in der Armee.) A. Dieudonne.
110 Three Cases of External Esophagotomy for Extraction of False Teeth. Mandel.
111 *Treatment of Wound from Bullet Grazing the Stomach. (Ver- [illegible] gens durch Streifschuss.) A. Schönwerth.
112 [illegible] Mental Distraction in Two Soldiers, with [illegible] ania. (Beiträge zu den epileptischen Bewusstseinsstörungen mit Wandertrieb.) Glas.
113 *Importance of Schwabach's Test for Diagnosis of Intracranial Changes. (Verwertung des Schwabachschen Versuches bei der Diagnose intrakranieller Veränderungen.) Hasslauer.
114 Advantages of Moist Precipitates of Mercury Iodids in Eye Lesions. (Hydrargyrum jodatum pultiforme und Hydrargyrum bijodatum pultiforme in der Augenheilkunde.) L. v. Ammon.
115 Impairment of Fitness for Military Service by Loss of Teeth Preventing [illegible] nfluss des Zahnverlustes auf d [illegible]) A. Neuner.
116 Epidemic Cere [illegible] nich. (Genickstarre in München.) G. Mayer and A. Waldmann.
117 Diagnostic Tuberculin Tests in the Army. O. May.

106. **Courses for Army Surgeons.**—This number of the *Wochenschrift* is dedicated to the Munich Surgical Institute for army surgeons on the occasion of its fiftieth anniversary, and all the 16 articles are on subjects of special interest to them.

107. **Treatment of Typhoid.**—Vogl reviews the history of typhoid in the last fifty years especially at Munich and urges the importance of very cold baths in treatment in army hospitals.

108. **Operability of Tumors in Pleura and Lungs.**—Seydel has been analyzing the material of the Munich pathologic institute and cases on record striving to determine from the autopsy findings whether an operation might have been successful, also how large a part of the lung can be resected, conditions in regard to metastasis, etc. Among 10,829 autopsies in the last 10 years he found records of 1,342 tumors and 184, that is, 13.7 per cent., were in the lungs or pleura. In 73.4 per cent. the tumors were metastatic; in 9.8 per cent. tumors starting in other organs invaded the lungs, and in 31 cases, that is, 16.8 per cent. the tumors were primary in the lungs. In this last group the tumors were all malignant, and he has found 92 similar cases in the literature. He thus has compiled a total of 123 cancers of the lungs and pleura. This does not include the 150 cases of lymphosarcoma in the bronchial glands in miners in the Schneeberg mines reported by Auke in 1884, observed among less than 700 miners. He found in the 31 cases only 7 cases in which an operation might have offered a chance for recovery. In 11 cases of primary sarcoma of the pleura, 3 seem to have been operable. There were 20 cases of primary carcinoma of the lung in his material and he reviews 35 others on record; only 4 could possibly have been resected. There were 2 cases of primary carcinoma in his material, and he has found 27 on record; in only 2 cases were conditions favorable for operative removal of the growth.

111. **Firearm Wound with Bullet Grazing the Stomach.**—Schönwerth advises in such a case bed rest with close supervision, permitting an operation at the first threatening symptoms, opening the abdomen and suturing serosa over the injured portion or resecting the latter if necessary. This treatment was applied in the case reported but the patient succumbed to the loss of blood from hemorrhage into the pleura.

113. **Importance of the Schwabach Test for Diagnosis of Intracranial Changes.**—Hasslauer has found the Schwabach test for determining the condition of the sound-conducting and sound-perceiving apparatus extremely useful in differentiation of intracranial disturbances in soldiers. The test is the measurement of the time during which a series of tuning forks

are heard by air conduction and by bone conduction. Both subjective and objective findings with the test should be considered. In his 22 cases the patients complained of headache during exercise, the pain increasing until it became intolerable in some of the cases. Some of the patients had vertigo and occasional nausea while on duty. No objective findings were obtainable and the soldiers were suspected of malingering until the Schwabach test confirmed their statements, revealing unsuspected lesions inside the skull. In most of the cases there was a history of some trauma affecting the head.

Wiener klinische Wochenschrift, Vienna

March 10, XXIII, No. 10, pp. 347-343

118 *Importance of Functioning of Peripheral Blood Vessels with Failing Compensation. (Bedeutung der Funktion der peripheren Blutgefässe beim inkompensierten Kreislaufe, und die sogenannte periphere Kompensation: Incompensatio et Compensatio peripherica.) M. Franke.
119 *Morbid Susceptibility of Thyroid for Iodin in Certain Families. (Ueber die Empfindlichkeit des Kropfes gegen Jod.) F. Pineles.
120 Concentration of Hydroxyl Ions in Pathologic Blood and Influence of Mercury. C. Kreibich.
121 *Experimental Nephritis under Influence of Chilling or Mechanical Factors. (Erkältungsnephritis.) B. Polak.

118. **The Peripheral Circulation.**—Franke discusses the various theories prevailing in regard to the functional importance of the peripheral blood vessels. His conclusions reaffirm, he asserts, that the peripheral vessels have an independent pressure and suction action similar to that of the heart; this assumption is sustained by their anatomic structure, physiologic experiments, direct observation of the blood vessels in living animals and in certain pathologic conditions in man. At the points where there is the greatest resistance to the circulation Nature has placed a system of especially powerful blood vessels like a second peripheral heart, as in the portal and intestinal vessels. Compensation may fail from disturbances in the peripheral vessels as well as in the heart itself, and the peripheral system may compensate the heart at need; the vessels in the abdomen especially are the last resort of all means to maintain the balance in the circulation. These views, he considers, explain the beneficial effect of gymnastics, massage and baths.

119. **Special Susceptibility of Certain Thyroids to Iodin.**—Pineles reports 6 cases in which unusually small doses of sodium iodid in patients with goiter induced symptoms of intoxication, the patients all presenting the familiar picture of hyperfunctioning on the part of the thyroid instead of the anticipated benefit. The total amount given in the course of the treatment ranged from 1 to nearly 7 gm. (15 to 100 grains) in the course of from 10 to 45 days, the daily dose being from 0.09 to 0.33 gm. In one patient the thyroidism developed after 10 daily doses of 0.1 gm. (1½ grains). Analysis of the cases showed that the patients were all from families with a tendency to exophthalmic goiter or diabetes or neuropathies. It is evident that the thyroid in these families was peculiarly susceptible to intoxication from iodin. The practical conclusion is evident that extreme caution is necessary in patients belonging to families with a tendency to exophthalmic goiter, diabetes or a neuropathic taint.

121. **Mechanical Origin of Nephritis.**—Polak has been trying to reproduce the experiments recently reported by Siegel in which nephritis followed exposure to cold. But Polak was unable to detect any tendency of the kind in his 11 dogs and in 13 tests on human beings. He concludes from these experiences that Siegel was mistaken in ascribing the albuminuria observed to the preceding exposure to cold; it is far more likely, Polak declares, that the albuminuria was the result of the way in which the dogs were fastened, making them stand upright on their hind legs and thus mechanically inducing lordosis responsible for the albuminuria.

Zentralblatt für Chirurgie

March 12, XXXVII, No. 11, pp. 401-432

122 *Fracture of the Neck of the Femur in the Young. (Coxa vara traumatica und ihre Behandlung.) R. Whitman (New York).
123 Celluloid Drains as Unbreakable Substitute for Glass Drains. R. Mühsam.

122. **Injuries of the Neck of the Femur in Early Life.**—Whitman's views in regard to treatment of traumatic coxa vara, etc., from fracture of the neck of the femur were described in THE JOURNAL, Jan. 16, 1909, page 248, and Feb. 20, 1909, page 656.

Zentralblatt für Gynäkologie, Leipsic

March 12, XXXIV, No. 11, pp. 370-400

124 *Prevention of Peritonitis after Abdominal Hysterectomy for Cancer. (Zur Verhütung der Peritonitis nach der abdominalen Exstirpation des karzinomatösen Uterus.) F. A. Scheffzek.
125 *Osteomalacia and Internal Secretion of the Ovaries. O. Falk.

124. **Prevention of Peritonitis After Abdominal Hysterectomy for Cancer.**—Scheffzek reviews the various measures in vogue to prevent postoperative peritonitis, showing that most of them fail of their purpose, and then describes a technic which he considers has proved more effectual. In preparing the cancer for removal he has found cauterization with the solid iron ball far preferable to the Paquelin cautery; the action is deep and intense. The cicatricial shriveling with an inoperable carcinoma is sometimes so extensive that the growth can scarcely be recognized. The vagina must be protected with a wooden speculum against the steam. When the abdomen is opened he separates the uterus from all attachments except from its connection with the vagina, then pushes the uterus down to the floor of the pelvis, aiding by traction applied below by forceps seizing the vaginal portion. The reflexion of the peritoneum from the bladder and that from the rectum are fastened to the fundus of the uterus with a single suture. Then the peritoneum is sutured together above, to roof over the small pelvis, leaving merely a small opening in the center through which a strip of gauze is drawn and laid on the suture in the peritoneum. The abdomen is then closed and the operation completed by way of the vagina. The uterus can then be pulled outside, as the vagina is loose; the uterus almost drops out of itself, and is easily resected. The peritoneum fastened to the fundus is then detached and sutured to the raw edges in the vagina and the lower end of the gauze drain is drawn into the vagina.

125. **Osteomalacia and the Internal Secretion of the Ovaries.**—Falk's article was found among his papers after his recent death. In it he discussed the present theories in regard to the action of castration in osteomalacia, concluding that as yet we have no experimental grounds for the assumption of an internal secretion of the ovaries, although it is highly probable.

Zentralblatt für innere Medizin, Leipsic

March 12, XXXI, No. 11, pp. 273-296

126 *Elimination of Phosphates in Tuberculosis and Chlorosis. (Phosphatausscheidung bei Tuberkulösen und Chlorotischen.) Zickgraf.

126. **Elimination of Phosphates in Tuberculosis and Chlorosis.**—Zickgraf has examined 50 patients to determine the influence of these affections on the elimination of phosphates. The difference between the average in these and in health is so slight, he declares, and the variations in health so wide, that these findings cannot be considered of much importance for differentiation.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 22, XXXI, No. 23, pp. 241-248

127 Technic for Operations on the Ureter in Conservative Treatment of Kidney Lesions. (Note di tecnica negli interventi ureterali per la cura conservativa renale.) R. Cassanello.

February 27, No. 25, pp. 257-272

128 *Injurious Influence of Concomitant Helminthiasis in Typhoid. P. Barabaschi.

March 6, No. 28, pp. 289-304

129 Pathogenesis of Congenital Talipes Equinovarus. G. Frattin.

128. **Helminthiasis and Typhoid.**—Barabaschi states that he found helminths in only 26 per cent. of 50 patients with various affections other than typhoid while he found the trichocephalus, sometimes associated with ascarides, in all but one of 26 typhoid patients, and in the case with negative findings possibly repeated examination might have revealed helminths. Guiart found the trichocephalus in 91.66 per cent. of his typhoid patients. These facts suggest, he says, the importance of such parasites not only in treatment of typhoid but also in prophylaxis. Barabaschi commends the practice of thorough purging at the onset of typhoid fever as aiding in expelling helminths. He is also an advocate of generous

feeding, believing that many of the serious symptoms in typhoid are due to the inanition rather than to the infection itself.

Policlinico, Rome

March 6, XVII, No. 10, pp. 291-322

130 *Convoluted Uterus. (Utero a lumaca.) L. M. Bossi.
131 Iodin in Surgical Disinfection. (Un nuovo metodo di disinfezione del campo operativo.) A. Grossich.

March 13, No. 11, pp. 323-354

132 *Relaxation of Masset[illegible] [illegible]sthesia. (Alcune osservazioni sulla [illegible] e sulla tecnica della narcosi in generale.) L. Fiori.

130. **Convoluted Uterus.**—Bossi's communication on the form of uterus with which the lower segment curls around like the convolution of a snail-shell, was mentioned in The Journal, July 4, 1908, page 88, as also the technic which he proposes to remedy the condition and promote the normal development of the uterus.

132. **Relaxation of Masseter in General Anesthesia.**—Fiori calls attention to the fact that the muscles of the jaw seem to feel the effect of the anesthetic before any other muscle, and thus the relaxation of these muscles is the sign that the desired effect is just being realized. The cessation of the contraction in this muscle is a much more reliable index, he thinks, than the sensory signs and changes in the reflexes, as the relaxation of the muscles indicates that the muscles in the field of operation are likewise relaxing which is not always the case when only the reflexes are abolished. The early effect of poisons on the mastication muscles is especially marked in the trismus of tetanus, in the action of strychnin, and in the appearance and disappearance of cadaveric rigidity. For the anesthetic he prefers a mixture of chloroform and oxygen; the latter, from an ordinary oxygen tank, comes bubbling through the chloroform into the mouth-piece.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

Health-Education Series. No. 17, Health in Labor Camps, by E. H. Richards. Price, 3 cents. Pp. 10. No. 18, Tuberculosis, by E. O. Otis, M.D. Price, 5 cents. Pp. 24. No. 19, When to Call the Physician, by G. W. Gay, M.D. Price, 4 cents. Pp. 15. No. 20, Habits of Health, by P. W. Goldsbury, M.D. Price, 4 cents. Pp. 24. No. 21, Wastes and Their Disposal, by H. J. Barnes, M.D., Professor of Hygiene, Tufts College Medical School. Price, 4 cents. Pp. 17. Paper. Special prices in quantities. Boston: Health-Education League (1910).

The Prolongation of Life. Optimistic Studies. By Elie Metchnikoff, Subdirector of the Pasteur Institute, Paris. English Translation Edited by P. Chalmers Mitchell, M.A., Secretary of the Zoological Society of London. Popular Edition with an Introduction by Charles S. Minot, LL.D., President of Boston Society of Natural History. Cloth. Price, $1.75 net. Pp. 343, with 27 illustrations. New York: G. P. Putnam's Sons, 1910.

The Sexual Life of Woman in its Physiological, Pathological and Hygienic Aspects. By E. Heinrich Kisch, M.D., Professor of the German Medical Faculty of the University of Prague. Only Authorized Translation into the English Language from the German by M. Eden Paul, M.D., Cloth. Price, $5. Pp. 686, with 97 illustrations. New York: Rebman Company [1910].

The Diseases of the Nose, Mouth, Pharynx and Larynx. A Text-Book for Students and Practicians of Medicine. By Dr. Alfred Bruck (Berlin). Edited and Translated by F. W. Forbes Ross, M.D., Late Civil Surgeon, His Brittannic Majesty's Guards Hospital, London. Assisted by Friedrich Gans, M.D. Cloth. Price, $5. Pp. 615, with 217 illustrations. New York: Rebman Company [1910].

Studies in Immunity. By Professor Paul Ehrlich, Privy Councilor and Director of the Royal Institute for Experimental Therapy, Frankfurt, Germany, and his Collaborators. Collected and Translated by Charles Bolduan, M.D., Bacteriologist, Research Laboratory, Department of Health, City of New York. Second Edition. Cloth. Price, $6. Pp. 712. New York: John Wiley & Sons, 1910.

The Surgery and Pathology of the Thyroid and Parathyroid Glands. By Albert J. Ochsner, M.D., Professor of Surgery in the Medical Department of the University of Illinois, and Ralph L. Thompson, M.D., Professor of Pathology in the St. Louis University School of Medicine, St. Louis. Cloth. Price, $6. Pp. 391, with 97 illustrations. St. Louis: C. V. Mosby Company, 1910.

Claims Arising from Results of Personal Injuries. The Relation Injury Bears to Disease and Disease to Injury. W. Edward Magruder, M.D., Associate Professor of Clinical Medicine, College of Physicians and Surgeons. Cloth. Price, $2.50. Pp. 266. New York: The Spectator Company (1910).

Handbook of Diseases of the Ear. For the Use of Students and Practitioners. By Richard Lake, F.R.C.S., England, Surgeon, Diseases of Ear, etc., London School of Clinical Medicine. Third Edition. Cloth. Price, $2.75 net. Pp. 238, with 66 illustrations. New York: William Wood & Company, 1910.

Rhinology. A Text-Book of Diseases of the Nose and the Nasal Accessory Sinuses. By Patrick W. Williams, M. D., Lecturer on Diseases of the Nose and Throat at the University of Bristol. Cloth. Price, $4.20. Pp. 273, with illustrations. New York: Longmans, Green & Co., 1910.

Essentials of Medical Electricity and Radiography. By Edward R. Morton, M.D., Vice-President, Electro-Therapeutical Section, Royal Society of Medicine. Second Edition. Cloth. Price, $1.75. Pp. 343, with 140 illustrations. Chicago: Chicago Medical Book Co., 1910.

Anatomy and Physiology of the Female Generative Organs and of Pregnancy. By Arthur E. Giles, M.D., Gynecologist to the Prince of Wales' General Hospital. Third Edition. Price, $1.50 net. Paper. Pp. 24, with illustrations. New York: Paul B. Hoeber, 1910.

Clinical Obstetrics. By Robert Jardine, M.D., Edin., Professor of Midwifery in St. Mungo's College, Glasgow. Third Edition. Cloth. Price, $6.50 net. Pp. 716, with 112 illustrations. New York: William Wood & Co., 1910.

Pocket Therapeutics and Dose-Book. With Classification and Explanation of Actions of Medicines, etc. By Morse Stewart, Jr., M.D. Cloth. Price, $1 net. Fourth Edition. Pp. 263. Philadelphia: W. B. Saunders Co., 1910.

The Simple Carbohydrates and the Glucosides. By E. Frankland Armstrong, D.Sc., Associate of the City and Guilds of London Institute. Cloth. Price, $1.20. Pp. 112. New York: Longmans, Green and Co., 1910.

A Synopsis of Surgery. By Ernest W. H. Groves, M.D., Assistant Surgeon to Bristol General Hospital. Second Edition. Cloth. Price, $3.25 net. Pp. 579, with illustrations. New York: William Wood & Co., 1910.

The Practical Care and Feeding of Children. By Mary A. Duns, Graduate of Woman's Hospital, Chicago, Ill. Second Edition. Cloth. Price, $1.50. Pp. 150. Chicago: Chicago Medical Book Co., 1909.

Some Common Remedies and Their Use in Practice. By Eustace Smith, M.D., Fellow of the Royal College of Physicians. Cloth. Price, $1.25 net. Pp. 112. New York: Paul B. Hoeber, 1910.

Annual Report of the Canton Hospital and the South China Medical College. For the Year 1909. Paper. Pp. 25.

New Patents

Recent patents of interest to physicians:

940775. Shoulder brace. J. U. Adams, Cincinnati.
940921. Disinfecting apparatus. W. M. Byer, Jersey City, N. J.
940958. Bed-pad. J. P. Duval, Kansas City, Mo.
941245. Water-bag. F. A. Gordon, Nogales, Ariz.
941197. Artificial hand. W. A. Hennessey, Ashland, Wis.
941036. Causticizing tank. E. F. Parker, Fairfield, Me.
940894. Optical cystoscope system. M. von Rohr, Jena, Germany.
940735. Apparatus for developing the lungs. V. J. Schaffer and J. M. Dempsey, Chicago.
940991. Syrup-pump for soda fountains. H. L. Snediker, Kansas City, Mo.
940831. Aseptic lamp for dental, medical or surgical purposes. D. Stern, Cincinnati.
941905. Liquid tight dosing device. E. M. Bajon, Paris, France.
941608. Instrument and medicine case. C. B. Benson, Tippecanoe City, Ohio.
941489. Medicine dispenser. F. M. Beverly, Marion, Ohio.
941673. Electrovibratory couch. W. A. Church, Los Angeles.
941620. Invalid bed. J. H. Comer. Comers Rock, Va.
941785. Producing a mineral oil emulsion. S. Knopf, Vienna, Austria-Hungary.
941423. Making preventive and curative lymph. S. Krafft, Munich, Germany.
941888. Antiseptic. A. [illegible]
942015. Syringe. J. W. [illegible]-the-Main, Germany.
941434. Hair tonic. C. [illegible]
40377. Design, reservoir for fountain syringes. D. W. Keith, Plankinton, S. D.
942046. Generating and storing ozone. F. M. Ashley, New York.
942700. Condensation product of phenol and formaldehyde and making same. L. H. Baekeland, Yonkers, N. Y.
942699. Making insoluble products of phenol and formaldehyde. L. H. Baekeland, Yonkers, N. Y.
942538. Antiseptic soap. W. A. Beatty, New York.
942547. Sanitary ware. J. J. Cosgrove Scranton, Pa.
942206. Massage apparatus. [illegible] York.
942093. Joint for artificial [illegible]ick, Chicago.
942521. Artificial foot. J. [illegible]
942590. Rectal apparatus. [illegible] Cleveland, Ohio.
942523. Irrigating syringe. W. S. Sawyer, Camden, N. J.
942596. Vibrator. A. J. Stecker, Detroit.
942299. Massage device. H. Wiking, Gottenborg, and B. J. Bengtsson, Kallered, Sweden.
943132. Producing nitrids. C. E. Acker, New York.
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943399. Making and recovering ammonia, etc. W. J. Dunnachie, Coatbridge, Scotland.
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Original Articles

SYPHILITIC DISEASES OF THE NERVOUS SYSTEM

THEIR RELATIONSHIP TO INADEQUATE AND IMPROPER TREATMENT OF SYPHILIS

JOSEPH COLLINS, M.D.
Physician to the Neurological Institute
NEW YORK CITY

The object of this communication is to point out that: 1. The occurrence of nervous diseases due to syphilis indicates that present-day treatment of syphilis is inadequate. 2. The teachings which promulgate the belief that such treatment is adequate are pernicious and far-reaching in their injuriousness. 3. Iodid of potassium is not in the strict sense an antisyphilitic agency, in so much as it has not been shown to have a specific action on the pale spirochete.

There are certain diseases of the nervous system, such as tabes, general paresis, a variety of myelitis, meningitis, endarteritis and neuritis, that are due directly to syphilis. This fact is so universally conceded that no attempt will be made here to give it statistical support, nor shall I debate the question whether or not certain of these diseases, such as tabes and general paresis, are ever due to other causes than syphilis. It is generally admitted that an antecedent infection of the blood by the spirochete of syphilis is the essential preparation for these diseases.

Until recently, much time and pains have been expended to prove that tabes and paresis were not syphilitic diseases in the strict sense of the term. That is, that the morbid process in the spinal cord and brain is not structurally of syphilitic material, that they are what were, and are still, called parasyphilitic diseases. It has been assumed that the syphilitic poison in the system causes a characteristic histologic reaction evidenced by what is known as the syphilitic exudate, and by the formation of tissue of extremely simple organization.

This assumption is purely gratuitous; and one of the results of the chemicopathologic investigations initiated by Bordet and Gengou and carried on by means of the procedures suggested by Wassermann, Noguchi and others, has been to demonstrate that the syphilitic poison is active in the system of the individual whose tissues are the seat of so-called primary degenerative disease such as tabes. It may legitimately be held, then, that syphilis is the cause of such degeneration.

Soon after I first became interested in the study of nervous diseases, being then in the way of observing a large number of cases of organic diseases, I was struck by what seemed to me a most inexplicable state of affairs relative to syphilitic and so-called parasyphilitic nervous diseases, *viz.*, that such diseases developed as soon after infection, and as virulently, if I may use that term, in those who had received what is considered to be adequate treatment for syphilis, as they did in those who had received little or no treatment. At that time I published a study of this subject.[1] This paper was never widely noticed or commented on. Some of the views that were expressed therein concerning the advisability of antisyphilitic treatment of the so-called parasyphilitic nervous diseases are now no longer held by me, but many of the facts which that investigation developed have been corroborated by further experience.

The only conclusion that I could draw from the facts set forth in that paper was that so-called adequate treatment of syphilis was in many instances inadequate, otherwise diseases of the nervous system due to syphilis would not develop. Since that time I have sought to inquire carefully into the treatment that has been given to patients who have come under my observation seeking relief from syphilitic diseases, especially tabes, general paresis, syphilitic spinal paralysis, pachymeningitis, disseminated cerebrospinal syphilis and cerebral and spinal thrombosis at the time of and soon after infection. It has astonished me to find that nearly all had been given potassium iodid often in large doses in the early stages of the disease, and that in the majority of cases the mercury given was administered in pill form.

In 100 consecutive cases of tabes there was a distinct history of syphilitic infection in 74. The average age of infection was 25; the average age when symptoms of tabes developed was 37; the average duration of treatment at the time of infection was 5 months. These figures are not of much value in estimating the adequacy of treatment to prevent post-syphilitic disease, for a few patients who had had no treatment at all bring the average duration of treatment down very low.

On the next page is a tabulated study of the 24 patients of this series who denied syphilis; it is interesting because it shows that in many of them there were incontestable evidences of syphilis.

It is impossible to determine the treatment which patients with general paresis have had with as much accuracy as one can determine it in tabetics. The mental state of many of them is such that slight reliance can be placed on their statements. This accounts also for the fact that a history of syphilis is not obtained so often as in tabetics. In 100 consecutive cases seen in hospital and private practice acknowledgement or history of syphilitic infection was obtained only in 63 instances. In many of those in whom there was no history of syphilis a positive Wassermann reaction was obtained.

In 38 cases of that form of subacute and chronic myelitis known as syphilitic spinal paralysis, a history feeding, believing that many of the serious symptoms in typhoid are due to the inanition rather than to the infection itself.

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[1] The Post-Graduate, July, 1896.

Policlinico, Rome

March 6, XVII, No. 10, pp. 291-322

130 *Convoluted Uterus. (Utero a lumaca.) L. M. Bossi.
131 Iodin in Surgical Disinfection. (Un nuovo metodo di disinfezione del campo operativo.) A. Grossich.

March 13, No. 11, pp. 323-354

132 *Relaxation of Masseter as Sign of Complete Anesthesia. (Alcune osservazioni sulla ossigeno-cloroformionarcosi e sulla tecnica della narcosi in generale.) L. Fiori.

130. **Convoluted Uterus.**—Bossi's communication on the form of uterus with which the lower segment curls around like the convolution of a snail-shell, was mentioned in THE JOURNAL, July 4, 1908, page 88, as also the technic which he proposes to remedy the condition and promote the normal development of the uterus.

132. **Relaxation of Masseter in General Anesthesia.**—Fiori calls attention to the fact that the muscles of the jaw seem to feel the effect of the anesthetic before any other muscle, and thus the relaxation of these muscles is the sign that the desired effect is just being realized. The cessation of the contraction in this muscle is a much more reliable index, he thinks, than the sensory signs and changes in the reflexes, as the relaxation of the muscles indicates that the muscles in the field of operation are likewise relaxing which is not always the case when only the reflexes are abolished. The early effect of poisons on the mastication muscles is especially marked in the trismus of tetanus, in the action of strychnin, and in the appearance and disappearance of cadaveric rigidity. For the anesthetic he prefers a mixture of chloroform and oxygen; the latter, from an ordinary oxygen tank, comes bubbling through the chloroform into the mouth-piece.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

HEALTH-EDUCATION SERIES. No. 17, Health in Labor Camps, by E. H. Richards. Price, 3 cents. Pp. 10. No. 18, Tuberculosis, by E. O. Otis, M.D. Price, 5 cents. Pp. 24. No. 19, When to Call the Physician, by G. W. Gay, M.D. Price, 4 cents. Pp. 15. No. 20, Habits of Health, by P. W. Goldsbury, M.D. Price, 4 cents. Pp. 24. No. 21, Wastes and Their Disposal, by H. J. Barnes, M.D., Professor of Hygiene, Tufts College Medical School. Price, 4 cents. Pp. 17. Paper. Special prices in quantities. Boston: Health-Education League (1910).

THE PROLONGATION OF LIFE. Optimistic Studies. By Elie Metchnikoff, Subdirector of the Pasteur Institute, Paris. English Translation Edited by P. Chalmers Mitchell, M.A., Secretary of the Zoological Society of London. Popular Edition with an Introduction by Charles S. Minot, LL.D., President of Boston Society of Natural History. Cloth. Price, $1.75 net. Pp. 343, with 27 illustrations. New York: G. P. Putnam's Sons, 1910.

THE SEXUAL LIFE OF WOMAN IN ITS [illegible] LOGICAL AND HYGIENIC ASPECTS. By E. [illegible] Professor of the German Medical Faculty [illegible] Prague. Only Authorized Translation into the English Language from the German by M. Eden Paul, M.D., Cloth. Price, $5. Pp. 686, with 97 illustrations. New York: Rebman Company [1910].

THE DISEASES OF THE NOSE, MOUTH, PHARYNX AND LARYNX. A Text-Book for Students and Practicians of Medicine. By Dr. Alfred Bruck (Berlin). Edited and Translated by F. W. Forbes Ross, M.D., Late Civil Surgeon, His Brittannic Majesty's Guards Hospital, London. Assisted by Friedrich Gans, M.D. Cloth. Price, $5. Pp. 615, with 217 illustrations. New York: Rebman Company [1910].

STUDIES IN IMMUNITY. By Professor Paul Ehrlich, Privy Councilor and Director of the Royal Institute for Experimental Therapy, Frankfurt, Germany, and his Collaborators. Collected and Translated by Charles Bolduan, M.D., Bacteriologist, Research Laboratory, Department of Health, City of New York. Second Edition. Cloth. Price, $6. Pp. 712. New York: John Wiley & Sons, 1910.

THE SURGERY AND PATHOLOGY OF THE THYROID AND PARATHYROID GLANDS. By Albert J. Ochsner, M.D., Professor of Surgery in the Medical Department of the University of Illinois, and Ralph L. Thompson, M.D., Professor of Pathology in the St. Louis University School of Medicine, St. Louis. Cloth. Price, $6. Pp. 391, with 97 illustrations. St. Louis: C. V. Mosby Company, 1910.

CLAIMS ARISING FROM RESULTS OF PERSONAL INJURIES. The Relation Injury Bears to Disease and Disease to Injury. W. Edward Magruder, M.D., Associate Professor of Clinical Medicine, College of Physicians and Surgeons. Cloth. Price, $2.50. Pp. 266. New York: The Spectator Company (1910).

HANDBOOK OF DISEASES OF THE EAR. For the Use of Students and Practitioners. By Richard Lake, F.R.C.S., England, Surgeon, Diseases of Ear, etc., London School of Clinical Medicine. Third Edition. Cloth. Price, $2.75 net. Pp. 238, with 66 illustrations. New York: William Wood & Company, 1910.

RHINOLOGY. A Text-Book of Diseases of the Nose and the Nasal Accessory Sinuses. By Patrick W. Williams, M. D., Lecturer on Diseases of the Nose and Throat at the University of Bristol. Cloth. Price, $1.20. Pp. 273, with illustrations. New York: Longmans, Green & Co., 1910.

ESSENTIALS OF MEDICAL ELECTRICITY AND RADIOGRAPHY. By Edward R. Morton, M.D., Vice-President, Electro-Therapeutical Section, Royal Society of Medicine. Second Edition. Cloth. Price, $1.75. Pp. 313, with 140 illustrations. Chicago: Chicago Medical Book Co., 1910.

ANATOMY AND PHYSIOLOGY OF THE FEMALE GENERATIVE ORGANS AND OF PREGNANCY. By Arthur E. Giles, M.D., Gynecologist to the Prince of Wales' General Hospital. Third Edition. Price, $1.50 net Paper. Pp. 24, with illustrations. New York: Paul B. Hoeber, 1910.

CLINICAL OBSTETRICS. By Robert Jardine, M.D., Edin., Professor of Midwifery in St. Mungo's College, Glasgow. Third Edition. Cloth. Price, $6.50 net. Pp. 716, with 112 illustrations. New York: William Wood & Co., 1910.

POCKET THERAPEUTICS AND DOSE-BOOK. With Classification and Explanation of Actions of Medicines, etc. By Morse Stewart, Jr., M.D. Cloth. Price, $1 net. Fourth Edition. Pp. 263. Philadelphia: W. B. Saunders Co., 1910.

THE SIMPLE CARBOHYDRATES AND THE GLUCOSIDES. By E. Frankland Armstrong, D.Sc., Associate of the City and Guilds of London Institute. Cloth. Price, $1.20. Pp. 112. New York: Longmans, Green and Co., 1910.

A SYNOPSIS OF SURGERY. By Ernest W. H. Groves, M.D., Assistant Surgeon to Bristol General Hospital. Second Edition. Cloth. Price, $3.25 net. Pp. 579, with illustrations. New York: William Wood & Co., 1910.

THE PRACTICAL CARE AND FEEDING OF CHILDREN. By Mary A. Duns, Graduate of Woman's Hospital, Chicago, Ill. Second Edition. Cloth. Price, $1.50. Pp. 150. Chicago: Chicago Medical Book Co., 1909.

SOME COMMON REMEDIES AND THEIR USE IN PRACTICE. By Eustace Smith, M.D., Fellow of the Royal College of Physicians. Cloth. Price, $1.25 net. Pp. 112. New York: Paul B. Hoeber, 1910.

ANNUAL REPORT OF THE CANTON HOSPITAL AND THE SOUTH CHINA MEDICAL COLLEGE. For the Year 1909. Paper. Pp. 25.

New Patents

Recent patents of interest to physicians:

940775. Shoulder brace. J. U. Adams, Cincinnati.
940921. Disinfecting apparatus. W. M. Byer, Jersey City, N. J.
940958. Bed-pad. J. P. Duval, Kansas City, Mo.
941245. Water-bag. F. A. Gordon, Nogales, Ariz.
941197. Artificial hand. W. A. Hennessey, Ashland, Wis.
941036. Causticizing tank. E. F. Parker, Fairfield, Me.
940894. Optical cystoscope system. M. von Rohr, Jena, Germany.
940735. Apparatus for developing the lungs. V. J. Schaffer and J. M. Dempsey, Chicago.
940991. Syrup-pump for soda fountains. H. L. Snediker, Kansas City, Mo.
940831. Aseptic lamp for dental, medical or surgical purposes. D. Stern, Cincinnati.
941905. Liquid tight dosing device. E. M. Bajon, Paris, France.
941608. Instrument and medicine case. C. B. Benson, Tippecanoe City, Ohio.
941489. Medicine dispenser. F. M. Beverly, Marion, Ohio.
941673. Electrovibratory couch. W. A. Church, Los Angeles.
941620. Invalid bed. J. H. Comer. Comers Rock, Va.
941785. Producing a mineral oil emulsion. S. Knopf, Vienna. Austria-Hungary.
941423. Making preventive and curative lymph. S. Krafft, Munich, Germany.
941888. Antiseptic. A. Liebrecht, Frankfort-on-the-Main. Germany.
942015. Syringe. J. W. Short, Geneva, N. Y.
941434. Hair tonic. C. Tsorones, Minneapolis.
40377. Design, reservoir for fountain syringes. D. W. Keith, Plankinton, S. D.
942046. Generating and storing ozone. F. M. Ashley, New York.
942700. Condensation product of phenol and formaldehyde and making same. L. H. Baekeland, Yonkers, N. Y.
942699. Making insoluble products of phenol and formaldehyde. L. H. Baekeland, Yonkers, N. Y.
942538. Antiseptic soap. W. A. Beatty, New York.
942547. Sanitary ware. J. J. Cosgrove, Scranton, Pa.
942206. Massage apparatus. J. W. Jones, New York.
942093. Joint for artificial limbs. F. W. Merrick, Chicago.
942521. Artificial foot. J. F. Rowley, Chicago.
942590. Rectal apparatus. J. P. Sanborn, Cleveland, Ohio.
942523. Irrigating syringe. W. S. Sawyer, Camden, N. J.
942596. Vibrator. A. J. Stecker, Detroit.
942299. Massage device. H. Wiking, Gottenborg, and B. J. Bengtsson, Kallered, Sweden.
943132. Producing nitrids. C. E. Acker, New York.
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942935. Apparatus for disposing of noxious gases. W. H. Sartain, Columbus, Ohio.
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There are certain diseases of the nervous system, such as tabes, general paresis, a variety of myelitis, meningitis, endarteritis and neuritis, that are due directly to syphilis. This fact is so universally conceded that no attempt will be made here to give it statistical support, nor shall I debate the question whether or not certain of these diseases, such as tabes and general paresis, are ever due to other causes than syphilis. It is generally admitted that an antecedent infection of the blood by the spirochete of syphilis is the essential preparation for these diseases.

Until recently, much time and pains have been expended to prove that tabes and paresis were not syphilitic diseases in the strict sense of the term. That is, that the morbid process in the spinal cord and brain is not structurally of syphilitic material, that they are what were, and are still, called parasyphilitic diseases. It has been assumed that the syphilitic poison in the system causes a characteristic histologic reaction evidenced by what is known as the *syphilitic exudate*, and by the formation of tissue of extremely simple organization.

This assumption is purely gratuitous; and one of the results of the chemicopathologic investigations initiated by Bordet and Gengou and carried on by means of the procedures suggested by Wassermann, Noguchi and others, has been to demonstrate that the syphilitic poison is active in the system of the individual whose tissues are the seat of so-called primary degenerative disease such as tabes. It may legitimately be held, then, that syphilis is the cause of such degeneration.

Soon after I first became interested in the study of nervous diseases, being then in the way of observing a large number of cases of organic diseases, I was struck by what seemed to me a most inexplicable state of affairs relative to syphilitic and so-called parasyphilitic nervous diseases, *viz.*, that such diseases developed as soon after infection, and as virulently, if I may use that term, in those who had received what is considered to be adequate treatment for syphilis, as they did in those who had received little or no treatment. At that time I published a study of this subject.[1] This paper was never widely noticed or commented on. Some of the views that were expressed therein concerning the advisability of antisyphilitic treatment of the so-called parasyphilitic nervous diseases are now no longer held by me, but many of the facts which that investigation developed have been corroborated by further experience.

The only conclusion that I could draw from the facts set forth in that paper was that so-called adequate treatment of syphilis was in many instances inadequate, otherwise diseases of the nervous system due to syphilis would not develop. Since that time I have sought to inquire carefully into the treatment that has been given to patients who have come under my observation seeking relief from syphilitic diseases, especially tabes, general paresis, syphilitic spinal paralysis, pachymeningitis, disseminated cerebrospinal syphilis and cerebral and spinal thrombosis at the time of and soon after infection. It has astonished me to find that nearly all had been given potassium iodid often in large doses in the early stages of the disease, and that in the majority of cases the mercury given was administered in pill form.

In 100 consecutive cases of tabes there was a distinct history of syphilitic infection in 74. The average age of infection was 25; the average age when symptoms of tabes developed was 37; the average duration of treatment at the time of infection was 5 months. These figures are not of much value in estimating the adequacy of treatment to prevent post-syphilitic disease, for a few patients who had had no treatment at all bring the average duration of treatment down very low.

On the next page is a tabulated study of the 24 patients of this series who denied syphilis; it is interesting because it shows that in many of them there were incontestable evidences of syphilis.

It is impossible to determine the treatment which patients with general paresis have had with as much accuracy as one can determine it in tabetics. The mental state of many of them is such that slight reliance can be placed on their statements. This accounts also for the fact that a history of syphilis is not obtained so often as in tabetics. In 100 consecutive cases seen in hospital and private practice acknowledgement or history of syphilitic infection was obtained only in 63 instances. In many of those in whom there was no history of syphilis a positive Wassermann reaction was obtained.

In 38 cases of that form of subacute and chronic myelitis known as syphilitic spinal paralysis, a history of infection was given in 31 instances. The Wassermann reaction was positive in 5 of the remaining 7 cases, and in 3 cases the diagnosis was made though there was no history of syphilis, this before the Wassermann test was discovered.

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[1] The Post-Graduate, July, 1896.

Of these 38 individuals, 19 had received treatment for nearly a year, 7 had received no treatment after the local manifestations had disappeared and 5 had had treatment for a few weeks. In every instance in which an intelligent account of the treatment given could be obtained, it was learned that iodid of potassium had been taken. In many cases the iodid was administered from the day that the patient put himself under the physician's care. To cite a few instances:

Sex.	Age.	Age When Symptoms Developed.	Remarks.
Male.....	45	42	Death from tabo-paresis at 50.
Male.....	45	43	Spinal cord fluid shows marked lymphocytosis.
Male.....	37	36	Marked improvement under mercurial injections.
Male.....	44	40	Optic type of tabes.
Female...	46	46	Ten miscarriages—improvement under injections.
Male.....	53	45	Death from exhaustion at 57.
Male.....	43	40	Wife had had several miscarriages—no living children.
Male.....	55	40	Marked improvement from taking mercurial injections.
Male.....	44	42	Improved while taking mercury.
Male.....	47	39	Heavy smoker and sexually intemperate.
Female...	42	40	Severe attack of malarial fever at 24—congestion of brain.
Female...	32	32	Said to have developed after shock in car accident—died at 37. Coroner's case.
Male.....	49	32	Heavy smoker.
Male.....	49	44	Wassermann reaction positive.
Male.....	43	38	Heavy smoker and drinker. Arteriosclerosis.
Male.....	55	51	Influenza at 48.
Male.....	38	35	Wassermann reaction positive.
Male.....	40	35	Wassermann reaction negative.
Female...	30	27	Sexually intemperate—At 35 greatly improved.
Male.....	34	31	Wassermann reaction positive.
Male.....	43	42	Reported improved.
Male.....	43	40	Improved.
Male.....	35	32	Wassermann reaction positive.
Male.....	40	33	Wassermann reaction positive.
Female...	38	34	"Malaria" when first married. "Shingles" at 28.
Female...	24	21	Has symmetrical scars on body.

Case 1.—Mr. X. was seen at the request of Dr. J. F. Erdmann for symptoms of brachial neuritis.

When 22 years old he had syphilitic infection, the ordinary local lesion, for which he consulted his physician in Mobile. The physician cauterized the lesion, gave him pills, one to be taken 3 times a day, and a "salt-tasting" medicine 10 drops in a dose, which was to be increased to 60 drops 3 times a day. This was continued for 6 months, the medicine being diminished or interrupted when disagreeable symptoms arose. At the end of that time he was advised to continue the medicine for another 6 months. When he was 38 years old, he was operated on for an acute inflammation around the cecum; the wound did not heal. Dr. Erdmann was asked to give an opinion concerning his condition, and suspecting that the antecedent syphilis had something to do with the retardation of his recovery, advised mercurial injections, and soon after asked me to see him, because of the symptoms mentioned above. The Wassermann reaction was positive though he had had intense mercurial treatment. Within 6 months the man recovered, and now, a year later, the Wassermann reaction is negative, and there is no evidence of disease of any kind.

Case 2.—A man now 30 years old, became infected with syphilis when 24. Almost from the beginning he displayed phenomena of great depression and self-concern. Within a year he tried to commit suicide, and within two years he had evidences of tabes with such mental symptoms that it was thought that the disease was in reality tabo-paresis. His mental symptoms subsided, and now he is an example of true tabes. His physician stated he had treated him for the original infection with mercury and iodid and had him more or less constantly under such treatment but it could not be determined that any manifestation of such medication had occurred save iodism.

Case 3.—The patient is a young man with syphilitic spinal paralysis. He contracted syphilis during his college days. He consulted a physician at once, who, he writes, gave him "mixed treatment" for nearly two years. Symptoms of subacute myelitis developed when he was 29 years old. He has practically completely recovered under intensive mercurial treatment.

Case 4.—A man, aged 44, consulted me in October, 1906, seeking relief from epilepsy which had developed during his forty-second year. He had no pupillary or mental symptoms to suggest general paresis, and no detectable arterial sclerosis. When he was 18 years old he contracted syphilis and was treated by a physician in his native city in Iowa. This physician gave him one dose of mercury, and iodid of potassium for one year. At the end of that time he told him that he was cured and that he was permitted to marry. He married, his wife had one child and six miscarriages.

This patient is a man of unusual intelligence, the director of a large business, and his statements are to be relied on. When he was seized with symptoms of epilepsy he apprised his physician of his previous disease and he was given tablets of biniodid of mercury, 1/30 grain, 3 times daily and iodid of potassium, 20 grains 3 times a day, increased to twice this amount. As this medication did not control his attacks, he was sent from the state of Washington, in which he now lives, to New York. He was put under intensive mercurial treatment, injections of bichlorid of mercury, which were kept up for 4 months, and this was followed by vigorous tonic treatment. During the year following this treatment he had two slight attacks. Since then he has had none. The Wassermann test made Jan. 20, 1910, gave a negative result.

I could cite a great number of such instances as these. In fact, I may say that I have been forced to conclude that syphilis has been and is treated in this country to-day not with mercury, as practically all teachers of this branch of medicine say it should be treated, but with mercury and iodid of potassium, the former administered in a desultory and inadequate manner, and if I may be permitted an opinion based on an experience with patients from all parts of the country more reliance is placed on the iodids as a curative agency than on mercury.

"Students are very rarely well instructed in syphilis; they are almost never thoroughly instructed," say Osler and Churchman.[2] If this is true, it may account for the fact that syphilitic nervous diseases seem to be increasing rather than decreasing. It would seem to me that the chief explanation of the occurrence of syphilitic nervous diseases is that the specific action of mercury in syphilis is not generally accepted or believed, and that there is an inherited and acquired belief that potassium iodid has a specific action in syphilis; and this in face of the fact that most modern syphilographers of the present day, especially in this country, are emphatic and direct in maintaining that the former is the real specific in the disease. Among these, Piffard is the most conspicuous example. As early as 1876 he pointed out that mercury was the agent that cured syphilis, while iodid of potassium was the vehicle which removed some of the manifestations of syphilis. It would seem now to be proved experimentally by Roux and Metchnikoff, who have succeeded in inoculating anthropoid apes, that the effects of the inoculation could be prevented before the virus gained entrance to the general system by the application of mercury. In other words, mercury applied locally destroys the spirochetes. They even go so far as to say that mercury is a greater specific against the local disease than against the general disease.

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[2] Osler: Modern Medicine, iii, 503.

I cannot enter into a discussion of this subject here, because it would necessitate citation of the experiments of Neisser which seem to show that injections of mercury immediately after the inoculation of the syphilitic virus prevents neither the development of a chancre nor the general distribution of the virus throughout the body. It would also necessitate opening that interminable inquiry whether the chancre is a local or a constitutional manifestation; or put in another way: when does it cease to be the former and become the latter? Finally, it would necessitate review of a similarly unanswered question: When shall the treatment of syphilis be begun? It would be fortunate if we could forget and unlearn all we have been taught by tradition concerning these matters, and begin with our present-day means of acquiring information concerning them. I assume that it is admitted to-day that the organism of Schaudinn may gain entrance to the system in various ways, and that at the point of entry, neither the chancre, chancroid, preputial herpes, venereal wart or gonorrheal inflammation need exist. Furthermore, it is admitted that one of these and more particularly the sore known as chancre not only marks the focus of infection but that its secretions contain the spirochetes which can be detected by suitable examination. This being a fact, the time to begin the treatment of syphilis is when the spirochetes are found and the substance with which to treat it is that which has a specific action on the spirochetes—mercury. Now, so far as I am able to determine by examination of the work of the authorities it has not been shown that iodid of potassium has any specific effect on the microorganisms. Since the days when its use was first popularized by Ricord, it has been stated and restated that it is mercury which cures syphilis, potassium iodid which erases the symptoms. When I state that the iodid of potassium is not an antisyphilitic agency, I do not mean to contend that it is not useful in the treatment of syphilis and of wondrous efficacy in overcoming some of the manifestations of syphilis, particularly so-called gummatous formations. It would be folly to deny what is not only common knowledge of all physicians, but what is every day being demonstrated anew. No more do I mean to deny that in certain cases of malignant precocious syphilis the disease does not yield to treatment until iodid of potassium is added to the medication. But the fact that iodid of potassium is a most potent and sometimes marvelous agency to cause absorption and dispersal of an exudate which is pathognomonic of the existence of spirochetes is no evidence that iodid of potassium has any action on the spirochetes themselves. Though a certain chemical may, for example, negative the action of, or dissolve and dissipate, a substance which is formed in a reservoir, polluting the water to the detriment of all who drink thereof, it does not follow that that same chemical scattered lightly on the soil of forest and hillside from which the reservoir drains its supply will prevent the formation of the deleterious substances.

I venture to believe that iodid of potassium is not an antisyphilitic agency in the strict sense of the term. There is no evidence that I have encountered to indicate that it has destructive effect on the spirochetes. I am aware that there are certain cases in which the Wassermann test continues to give positive reaction until iodid of potassium has been added to the medication, but that does not prove that the drug is inimical to the life of the spirochetes. Nor am I aware that satisfactory evidence has been offered to prove that antibodies disappear under the use of iodid of potassium alone, although I have read the article of Lesser on this subject.[1] Furthermore, I am of the opinion that not infrequently the use of iodid of potassium during the early stages of syphilis is deleterious in so much as it impairs the patient's vitality and interferes with that condition on which the cure of syphilis is dependent—the reaction which takes place in the patient's tissues through the administration of the curative agency, mercury.

The other point that I wish to make is that so long as it remains the custom, which it would seem is now well nigh universal, to administer mercury by the mouth, we cannot hope to know whether or not a sufficient amount of mercury is absorbed to combat successfully the action of the spirochetes and to annihilate them. The occurrence of ptyalism and other disturbances of the digestive tract is no indication that mercury is being taken in doses adequate to combat the disease. Many individuals present indications of the toxic effects of the drug before any considerable quantity is taken. An idiosyncrasy to the drug or an intolerance of it, does not signify that the system is impregnated, yet how often we find in the history of a given case that on the occurrence of such symptoms the amount of the drug was materially diminished or some other substance substituted for it. We cannot possibly know how much mercury is absorbed into the system unless we rub it through the skin or introduce it hypodermatically. In that way alone can we judge how much mercury is being put into the system, and satisfy ourselves that a sufficient amount has been absorbed to cure the disease or to kill the *Spirochæta pallida.*

The adequate treatment of syphilis is not the administration of so many grains of mercury and so many ounces of iodid of potassium, nor yet is it encompassed by "taking mercury for a year and potash for six months." It is encompassed by getting an amount of mercury into the system that will prevent the propagation of the specific organisms and the formation of the antibodies, and the way to tell if this is being accomplished is by the application of the Wassermann test. Not until we get repeated negative reactions are we justified in discontinuing mercurial treatment.

Finally, the individual who has syphilis is an important factor to consider if it is our ambition to cure syphilis and to prevent syphilitic nervous diseases. How many of these patients, even the most intelligent, appreciate that it is of vital importance to receive prolonged, and often debilitating and distressing treatment? Now that we have a safe therapeutic test in the Wassermann reaction, every patient should be urged imperatively to submit himself for such examination at least once a year for five years after he is discharged by his physician.

In conclusion, I wish to state my belief based on my entire experience and the consideration which I have given to the disease and its sequelæ from a theoretical standpoint, that we shall be able materially to diminish the occurrence of syphilitic nervous diseases by advocating the use of mercury as a specific for syphilis and deprecating the use of iodid of potassium save as an absorbefacient of gummatous tissue. Thoroughness of mercurial treatment is our only safeguard against diseases of the nervous system that flow out of syphilis.

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[1] Lesser: Deutsch. med. Wchnschr., 1909, xxv, 379.

It is no part of my purpose to decry the therapeutic property of the salts of iodid. Were it so, I could marshall an array of facts to prove their injuriousness when given in comparatively small doses (from 40 to 60 grains a day) for a protracted time. I appreciate the therapeutic possibilities of the iodid, but I am convinced that the therapy of organic nervous diseases, save gummatous formation on and within the nervous system, would be more satisfactory if the salts of iodin were no longer in use.

37 West Fifty-fourth Street.

STANDARDS IN MEDICAL EDUCATION AS RELATED TO STANDARDS IN GENERAL EDUCATION *

HON. ELMER ELLSWORTH BROWN
United States Commissioner of Education
WASHINGTON, D. C.

It is not necessary to remind you that American education in general is just now on a rising tide of interest in our scholastic standards. How long that tide has been rising was shown to me a few weeks ago when I was present, by invitation, at a meeting of the senate of the Methodist Episcopal Church. I found there a body of men, engaged in fixing, at a high level, the standard for collegiate institutions to be recognized and in a measure supported by that religious society, and I learned that the far-reaching action of this senate at its latest meeting is the culmination of labors in which the same body has been engaged for twenty years.

There are, of course, other endeavors of a somewhat similar character which have been in progress over much longer periods. Good movements do not begin and end. They arise through a redirection of earlier movements and take their new turn and impetus under the pressure of new needs. In education we have always sought for the better as against the worse. But there are new needs at this time which demand that we discriminate more sharply than has hitherto been done. We are seeking the best, and sometimes we must look on even the good as among its dangerous enemies.

The work that the Council on Medical Education is doing for medical education is all bound up with the movements of our time in general education, and in education of every type and grade. It is because you have recognized this fact so clearly and because in its special field you have done so immensely difficult and significant a work, that, in spite of being a mere layman among physicians, I have come, to-day, with the keenest anticipation, to the meeting of this Council.

STANDARDS OF EDUCATION

The considerations which have given new vitality to the standardizing movement are of various kinds. In the end and summing up, they are chiefly moral considerations. This fact calls for emphasis. It is bad for our moral standards, unspeakably bad, that we should be content with low or doubtful standards in our education. The recognition of this fact, more than anything else, lends poignancy to the demand that the educational offerings of different institutions shall have an ascertainable value. The finest values in education, to be sure, can never be measured or compared. And that is not attempted. The demand is only that the measurable elements of education shall be submitted to measurement. One of the keenest moral twinges of this demand comes with the thought that only by such standardizing can we assure to our people everywhere that they are getting full measure in education, or expose the cheat if the measure has been scanted.

But there are other considerations that are not to be ignored. Some of these are financial. It has become apparent, by slow degrees, that light weights and cheap adulterations do not pay in education any more than they pay in trade. An artificial providence has hastened the recognition of this fact, by rewarding, on the spot, those institutions which measure up to its prescribed levels, and withholding payment from those who do not. Where public authorities have failed to act and the vague demands of public opinion have failed to do their work, two or three private individuals with money in their hands have accomplished wonders in a very little time.

Then, there are purely academic influences which have had great weight. A new university, in which high attainments and high requirements are predominant, wins the attention and commands the confidence of the public over some great section of our land. Its standards displace the lower ideals of an earlier time. The educational level of a whole region is raised, and insensibly the public has become more discriminating in its sense of educational values. Such an influence, in recent years, has centered here in Chicago and has spread abroad throughout the middle west. And other examples, not a few, might be enumerated.

Along with these considerations and influences have been others which have centered in the several professions. Professional pride, professional advantage, and the sense of professional responsibility, have led engineers, lawyers, teachers, and those of other crafts and guilds, to make higher demands on their own members than were made by law or by public opinion. As the most scientific of the older professions, we look to the medical fraternity to lead in such a movement. And the leadership already displayed by this Council has helped to advance the standards of education in general.

A HISTORY OF MOVEMENTS FOR STANDARDS IN EDUCATION

Before passing on to speak of the considerations to which I should like particularly to direct attention to-day, let me mention a comprehensive review of the standardizing movement which is now in preparation. I refer to that undertaken by President MacLean, of the University of Iowa, which is to be published some months hence by the Bureau of Education. So great progress has been made of late in the determination of scholastic standards over disconnected but not unrelated fields, so chaotic, after all, is the present situation, that the time seems opportune for a setting forth of the history and results of the movement in all of its principal ramifications. It is such a survey, or at least a first draft of such a survey, that President MacLean has undertaken. There is reason to hope that his bulletin may prove an indispensable handbook for those who are concerned with the determination of standards in all parts of the educational field.

The preparation of such a handbook is one small part of what the federal government can contribute to this movement. Let me now speak briefly of certain other governmental aspects of this matter; for it is the public and patriotic considerations entering into the case which I should like to bring to the front at this time.

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* Read before the Joint Conference of the Council on Medical Education and the Committee on Medical Legislation of the American Medical Association, Chicago, Feb. 28-March 2, 1910.

WORK AND LIMITATIONS OF VARIOUS AGENCIES

Professional and private agencies have a great part to perform in the bettering of educational and professional conditions. Besides their services of a more permanent character, they must do a great part of the necessary pioneering. But when they have blazed the way, when they have cleared the ground, it is the part of governments, municipal, state and national, to fix and confirm, and perhaps to modify, a part of the gains which they have made, in the forms of law and of administrative procedure. Those results of private initiative which are the most widely applicable and useful are likely to be found suitable for embodiment in the fabric of government. While government must stop short of many good acts, because they do not yet represent the will and purpose of the people as a whole, the popular will, when it can be brought to approve of some part of a program of betterment, serves by its laws and regulations to encourage the labors of those who are working for betterment far out beyond the range of legislation.

All of this is doubtless obvious enough. But the real difficulties of the situation often arise in this country from the multifarious requirements of our many states. Foreigners who seek to report fairly concerning education and the professions in this country often find themselves baffled by the diversities which the requirements of the several states present. Now, we do not think it necessary to apologize for the independence of action which our American states enjoy. We have faith in the American form of government. We would even go to the length of believing confidently that the very diversity and lack of coherence which the states display, in their regulation of the practice of the several professions and in many other particulars, bears in it the promise of unusually rich developments within these several fields. We have no desire for enforced uniformities in these matters. But we do wish to see the inherent advantages of the American system fully realized.

A certain loss of prestige we have certainly suffered in the estimation of the civilized world because we have not been able to present a united front and to show that high professional requirements are everywhere maintained and enforced in these United States. Our physicians and dentists, who seek in considerable numbers to engage in professional practice in foreign countries, still suffer material disadvantage because of such conditions. The files of the Department of State at Washington contain appeals for action to relieve this situation. And the cases are innumerable in which our own citizens, who merely pass from one state to another in the home land, suffer serious inconvenience and even personal loss because of incongruous requirements touching their professional training. Yet even in the face of these facts, we do not say to our critics, "Yes, the system is wrong and should be replaced by a better." We may say instead, "Our system is not yet working smoothly, so far as these interests are concerned. But it has within itself the remedy for these evils, and even now it is on the way to better things than a purely centralized system could hope to accomplish."

We have here some fifty experiment stations for trying out all manner of regulations, and selecting those which shall prove to be best, with due regard for incidental variations to meet local and sectional needs. We are now engaged in the trying out. We have hardly begun as yet to scrutinize the results of our fifty experiments and determined which plan of all is best. We shall not stop even at that, but when our comparative studies have yielded their full result they will have shown what is best as regards both unity and diversity. They will have taught us concerning the things in which the several states may profitably act in unison, and also concerning the things in which, without conflict or disharmony, they may profitably act on independent lines.

EFFORTS TOWARD UNIFORMITY

From this point of view, the study of comparative legislation and administration looms large in the near future. A national policy, as regards educational and professional standards, does not depend on federal action alone. It may be determined, and quite as effectively, through free cooperation of the several states—the chief rôle of the federal government in this case being to promote the needed cooperation.

This mode of governmental procedure in the United States was definitely launched by the assembling of the first Conference of Governors, at the White House, in 1908. Some weeks before that conference was held the state superintendents of public instruction had held their first conference, also in the City of Washington. During the first week in March, 1910, at Indianapolis, the state officers of education will hold their fourth conference. The topic which they will have under discussion will be "Desirable Uniformity and Desirable Diversity in the Educational Legislation of the Several States."

What has thus far been said points, I think, to this conclusion: That the time has come for a new effort to secure concerted action on the part of the several states touching professional and educational standards, and that professional and educational bodies should work in unison to that end.

A fresh evidence that men are turning to the thought of uniform legislation has recently appeared in the action of the National Civic Federation, which is entering on a general campaign in behalf of uniformity. Many other indications point in the same direction.

Let me emphasize again the fact that I am not in love with governmental uniformity, for its own sake. It is unity in variety which most appeals to me. But I think we have now pushed variety far in advance of unity. It is in the interest of a just balance that we should hereafter endeavor to give to unity its fair chance of realization.

Consider, for example, a single instance, in which educators and other professional men are equally interested, the appalling diversity as regards our standards in higher education, particularly as represented by requirements for the bachelor's degree. A pioneering work of incalculable value has been performed by the Carnegie Foundation, in setting a mark below which collegiate institutions may not fall without bringing their educational standing into question. It would be hard to overestimate the value of this service. But the American people will not rest with a condition under which its collegiate standards, and even its standards in secondary education, are determined by an institution under purely private control. The greatest work of the Carnegie Foundation is to be that of calling public attention to the need of radical improvement at this point in our educational system. It has called up questions which must eventually be dealt with by the educational establishments of the several states, backed by legislative authority.

It is of the greatest moment that hasty and ill-advised action touching such vital and difficult questions shall not be taken by the state authorities. The responsibility for definitive action rests with them. Such action should be taken in any given state only after full consideration of whatever related action may be under way in other states, and full consideration of the matured judgment of educational and professional bodies representing the country at large.

COOPERATION OF MEDICAL AND GENERAL EDUCATION

The Council on Medical Education stands at a focal point in this undertaking. It represents fundamental interests of our people, outside of the purely academic field. On the other hand, every step that it may take depends on educational conditions. Educational and professional concerns, indeed, are so closely bound together that professional societies, and particularly those having to do with medical affairs, should be found working in close accord with the great body of educational workers. Such cooperation is for the good of both. It is also for the good of those overshadowing public interests which are served alike by teachers and physicians.

NEW HOPE IN UNITED EFFORTS

With full cooperation between the educational and the professional forces of this country, we may enter with new hope on the old campaign for high and consistent standards. It would give point to this new cooperative effort if the Council on Medical Education might be represented at the Conference of State Superintendents of Public Instruction. Inasmuch as the Conference meets on the call of the Commissioner of Education, I may venture to extend to you a cordial invitation to be so represented.

Medical education must be grounded in the general system of education. It will come to its best only when it can rest on a sound and ample system of secondary schools and be backed against the scientific and literary greatness of a true university. Our educational leaders, on the other hand, will be nerved up to their best endeavors when they see clearly the connection between their scholastic undertakings and those technical and professional pursuits through which education comes into its most direct service of the public good.

The combination of these related interests broadens out into the widest reaches of practical patriotism. Education and medicine are to be fellow-servants in much of the great work of the coming civilization. Together they are to increase our prestige and influence abroad as well as our happiness at home. In more ways than have yet been worked out they are to be a strong support of our federal government in assuring to this nation its rightful place and influence among the nations of the earth. That the representatives of these two great national interests, many of whom are educators and physicians, both in one—that they shall together see both sides of this problem with which the Council on Medical Education is dealing, and shall together work for the great ends which you have proposed, is a consummation, not too great to be hoped for, but one to be furthered by every means within our power.

Value of Disease Statistics.—It is only by a separation of the severe from the milder cases, together with a detailed report of each case on which statistics are based that an adequate comparison between the clinical and the laboratory findings can be made. The mere publication of numbers cannot further the study of abdominal inflammation unless accompanied by exact data. Such articles can be regarded merely as expressions of opinion and *are of no* great value as evidence to workers in surgical science.—A. E. Hertzler, in *New York Medical Journal.*

PELLAGRA: TRANSFUSION IN ELEVEN CASES

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Confining ourselves to a consideration of the theories, experiments and facts bearing on the nature and action of the toxic substances of pellagra, no matter what be their origin, we suggest the possibility of combating these toxins *in vivo* by antagonistic substances existing in the body as the result of a natural or acquired immunity.

As evidence of the existence of specific toxic and antitoxic bodies the following facts may be noted:

Tizzoni[1] has produced typical pellagrous symptoms in animals by injection of pellagrous human blood.

Lombroso[2] claims to have produced typical pellagrous manifestations by the administration of an alcoholic extract of impure maize by mouth.

Babes[3] and other workers have found in the serum of pellagrins a substance antagonistic to extracts of damaged maize, that is a specific antibody.

Giovanni and Gatti,[4] from their work on pellagrous serum, conclude that the serum of pellagrins has a hemolytic action much above normal, suggesting the presence of an antibody. They further claim to have demonstrated precipitative properties in pellagrous blood. D'Ormea, working independently, likewise concludes that there is a definite specific antibody developed in pellagrins.

Antonini and Marianni[5] claim that a definite immunity is developed in cured pellagrins and that the serum exhibits specific antitoxic action against the maize poisons. They have developed an artificial immunity in rats, rabbits and goats against pellagrous toxins. Finally, they conclude that a serum therapy can be instituted in grave pellagra cases.

The work of these investigators warrants the following belief:

1. Pellagra is an intoxication, the toxic principles existing in the blood of pellagrins.
2. The production of pellagrous symptoms by the injection of blood from pellagrins, the definite precipitative, hemolytic and antitoxic action of the serum, the artificial immunity produced in animals and the immunity acquired in patients recovered from pellagra, are all suggestive of a serum treatment as the solution of the pellagra problem.

The curative value of pellagrous serum in man has been tried by Antonini and Marianni,[6] who, using the serum of recently recovered typhoid pellagrins, noted cures in several instances. Their work was most carefully performed, the potency of the serum being tested on animals before its hypodermic administration to patients. Lombroso, in a personal communication to us, commenting on the work of these investigators, states that he believes that serum injection is of undoubted value in the treatment of pellagra.

Transfusion of blood from a recovered pellagrin would possess all the curative properties exhibited by the serum alone, as administered hypodermatically, and in addition would tend to improve the anemia in the severe cases.

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[1] Tizzoni: Quoted by Wood in THE JOURNAL A. M. A., July 24, 1909, liii, 274.

[2] Lombroso: Quoted by Watson in New York Med. Jour., May 8, 1909.

[3] Babes: Quoted by Lavinder in Pellagra; a Précis, Rep. P. H. and M.-H. S., 1907.

[4] Giovanni and Gatti: Richerche sulle proprieta emolitiche e citoprecipitante del siero de sangue de pellagroso, 1909.

[5], [6] Antonini and Marianni: Contributo allo studio dello sieroterapia nella pellagra, 1904.

In many of the cases transfused we have been unable to obtain donors recovered from pellagra. In these cases we have selected relatives who have lived on the same diet and in the same environment, in this way hoping to find donors who possess a certain degree of natural immunity.

Transfusion has been resorted to only in patients resisting all forms of medical aid. The operation has been done in all instances as a last resort. Several of the patients were apparently in the last stages of the disease. The high mortality rate in the patients so far transfused, we can but feel, is largely due to the fact that many of the patients operated on were in a practically hopeless condition at the time of operation. We believe that earlier operation will give decidedly better results than those so far obtained.

None of the patients who recovered received any post-operative medical treatment other than a gastric tonic and occasionally carbonate of iron. Most careful attention has been given to the post-operative diet in all the cases. The operation of transfusion consists in uniting the radial artery of one individual to any forearm vein of the patient, either by the suture method of Carrel or the cannula method of Crile, and allowing the blood to flow from the first to the second person. This is, at best, a delicate operation and should be performed with a full knowledge of the dangers to both the donor and the recipient.

The dangers to the recipient are (1) transmission of disease, (2) hemolysis, (3) agglutination, (4) acute dilatation of the right heart. These conditions are guarded against by careful selection of the donor and by careful test-tube experiments for hemolysis and agglutination. At the operation careful observation of the recipient's pulse and general condition ward off acute dilatation of the heart. Postural treatment together with bleeding are of value in treating the condition when present.

The rate of blood-flow is controlled by means of rubber-covered clamps and the fingers. This, with careful observation of the donor's blood-pressure and pulse, control the sole danger to the donor, that of exsanguination.

There are many small factors on which the success of the operation depends. Only repeated experimentation on animals would justify one in attempting the procedure on human beings. Without technical knowledge of the operation and without careful selection of the cases this procedure will surely fall into an undeserved ill repute.

The first transfusion performed in pellagra[7] was performed on Aug. 3, 1908, through the kindness and assistance of Drs. McCafferty and Tisdale at Mt. Vernon, Ala. The result was so suggestive that other patients were transfused. We present the short histories of 11 cases in which transfusion was employed.

CASE 1.—The patient, a negress, aged 25, had acute pellagra of three weeks' duration. At examination she presented a marked stomatitis, profuse diarrhea, and incontinence of feces. Nourishment had been practically *nil* for several days because of gastro-intestinal condition. There was a characteristic pellagrous rash over arms and hands, face and legs, and marked emaciation and asthenia. Hemoglobin was 70 per cent. The patient was *in extremis* at time of operation (August 3, 1908, Mount Vernon, Ala.); pulse 140. Transfusion was performed from a young negress who recovered from a definite attack of pellagra one year before. The patient made a remarkable recovery, the skin lesions rapidly disappearing, the stomatitis improving and a marked increase in weight and general condition ensuing in the first week. Within a week the patient was up and about the ward. She went on to recovery and has had no relapse; it is now nineteen months since the operation. Strangely enough, the donor developed an attack of pellagra a few months ago and succumbed. The results in this case were so suggestive as to warrant further trials of the procedure.

CASE 2.—The patient, a white woman, aged 22, referred by D. D. Armstead, Campbell, Ala., with chronic pellagra of four years' duration, had had attacks of stomatitis, indigestion and diarrhea of six months' duration every spring for the last four years. Fourteen months before coming under observation she had had a cutaneous eruption over the backs of both hands, and in the past few weeks marked mental and nervous symptoms, increasing in severity, and sensory symptoms of head and feet. At examination she was found to be markedly emaciated; weight 60 pounds, average weight over 100 pounds. Asthenia was marked. There was a pellagrous eruption over the backs of both arms and hands. Asthenia was marked. There was a pellagrous eruption over the backs of both arms and hands. Stomatitis, diarrhea, and marked mental symptoms (those of depressive melancholia) were present; reflexes increased. Pulse-rate was out of proportion to the temperature; hemoglobin, 70 per cent. Transfusion was performed July 3, 1909, at Mobile, Ala. The donor had never had pellagra. Four days after the operation the skin lesions began to desquamate, the nervous and mental symptoms rapidly disappeared. Within a week the diarrhea had disappeared. The patient gained 8½ pounds in the first ten days. She went on to recovery and has had no signs of relapse. It is now over eight months since the operation.

CASE 3.—The patient, a woman, referred by Dr. P. A. Trice of Morvin, Ala., had chronic pellagra. One year before coming under observation she had an attack of diarrhea lasting six months. There was a history of pellagrous eruption, marked asthenia, emaciation and pronounced nervous symptoms at that time, but no mental symptoms. At examination the patient presented signs of the old eruption, increased reflexes, asthenia, nervous excitability and anemia. Hemoglobin was 70 per cent. The patient had lost 30 to 40 pounds in weight. Transfusion was performed at Morvin, Ala., on July 18, 1909. The donor had never had pellagra. Three days after the operation the patient showed definite signs of improvement. Twelve weeks afterward, she had gained 15 pounds, the anemia was much improved and she stated that she felt stronger than in three years. She went on to a perfect recovery and has had no relapse; it is now eight months since the operation.

CASE 4.—The patient, referred by Drs. Hand and Bailey, Demopolis, Ala., had acute pellagra. Pellagrous erythema developed over the backs of both hands six weeks before the patient came under our observation, and spread to forearms, elbows, sides of neck and face. There was marked stomatitis, asthenia, emaciation and anemia. The stomatitis and diarrhea had been so severe as to interfere seriously with feeding in the past three days. At examination, the patient was seen to be markedly wasted, the eruption present as above, a deeply pigmented mask now extending over the entire face. The lips were ulcerated, a swollen and blackened tongue protruded, and from the mouth drooled forth a slimy, fetid discharge. The patient was in a moribund condition. Hemoglobin was 60 per cent. Pulse was 160. Transfusion was considered practically useless, but was performed July 11, 1909, at Demopolis, Ala. The first donor had recently recovered from an attack of pellagra. On account of the weakened condition of the donor this transfusion was ended in the first fifteen minutes. Transfusion was then reestablished from the husband, who had never had pellagra. There were some symptoms of acute dilatation of the right heart in the patient. This patient died three hours after the operation, the condition not improving after the operation. The prolonged operation may have had some influence on the early death, though death was but a matter of a few hours otherwise.

CASE 5.—The patient, a white woman, aged 53, referred by Dr. Bondurant, Mobile, Ala., with chronic pellagra, had had persistent diarrhea for two years; and one year before coming under our observation, a pellagrous eruption ov[illegible] the backs of both hands. The eruption reappeared six months later. A few weeks before operation the patient developed marked mental and nervous symptoms, sensory symptoms in the head and feet. At examination she was found markedly emaciated; a desquamating skin lesion was present over both hands and forearms. Constant involuntary muscular tremors, low muttering delirium and at times hallucinations were present, with asthenia and increased reflexes. Hemoglobin was 60 per cent.; weight 70 pounds; average weight over 100 pounds. Transfusion was performed July 17, 1909. The donor had never had pellagra. Within twenty-four hours the nervous and mental condition was markedly improved. The patient rapidly improved, gaining 8½ pounds the first week and 34 pounds in the first eleven weeks after the operation and is still gaining. Every symptom of pellagra has disappeared; the mental condition is perfect. There has been no recurrence. Strangely enough, the patient has no recollection of several weeks of her illness during which time the transfusion was performed.

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[7] Cole: The Transfusion of Blood as a Therapeutic Agent with Report of Transfusion in a Case of Pellagra, Southern Med. Jour., April, 1909, p. 631.

Case 6.—The patient, a white woman, aged 50, referred by Dr. Sarah A. Castle, Meridian, Miss., with chronic pellagra, had several attacks of persistent diarrhea for the past two [illegible]. Four months before coming under observation the patient had a severe attack of diarrhea followed by a severe stomatitis. Four weeks before examination a pellagrous eruption appeared over the hands and spread to the forearm, face and legs. There had been marked nervous and mental symptoms for the past six weeks. This approached acute delirium at times. Sensory symptoms at times were severe. At examination the patient was found to be markedly emaciated, asthenic, with desquamating skin lesion over the arms, face and legs. There was incontinence of stools, a marked stomatitis and a fetid, drooling discharge from the mouth. Transfusion was performed at Meridian, Miss., on July 22, 1909. The donor was an arteriosclerotic individual. The marked atheroma of the donor's radial artery prevented a successful anastomosis. Little if any blood was transfused at this time. The patient showed no signs of improvement and was again transfused, Aug. 17, 1909. The donor employed at the second operation had recovered from a definite attack of pellagra two years before. There was no definite sign of improvement and the patient died four weeks after the second transfusion. A successful anastomosis at the first operation might have resulted in improvement, though the patient was in a very serious condition even at that time.

Case 7.—The patient was a white man, aged 30, referred by Dr. J. L. Bryan, Greenville, Ala., with chronic pellagra. Six months before examination the patient had a severe and persistent diarrhea and developed a pellagrous eruption over the hands and forearms. On examination the patient was found to be profoundly emaciated, with pronounced nervous and sensory symptoms; the reflexes were increased. The diarrhea and stomatitis, while still present, were not severe at this time. There was a desquamating skin lesion over the backs of both hands and forearms. Hemoglobin was 60 per cent. Transfusion was performed July 25, 1909, at Greenville, Ala. The donor was a restless 14-year-old boy. The anastomosis was not entirely successful owing to the restlessness of the donor and the operative surroundings. The operation was attempted by the light of a single oil lamp. Very little blood was transfused. The patient showed no signs of improvement and died twenty-six days after the operation.

Case 8.—The patient, a white woman, aged 30, referred by Dr. Armstead, Nanafalia, Ala., with chronic pellagra, had had a severe attack of pellagra one year before examination, with diarrhea, stomatitis, marked mental and nervous symptoms; duration two months. Three weeks before examination a pellagrous eruption developed over the backs of both hands and wrists. A severe stomatitis developed and there was marked exacerbation of the mental symptoms. At examination stomatitis, diarrhea, pellagrous eruption, increased reflexes, severe mental symptoms, and a severe degree of emaciation were present. Hemoglobin was 70 per cent. Transfusion was done July 24, at Mobile, Ala. The donor never had had pellagra. Within twenty-four hours the patient showed marked improvement in mental condition. The eruption, diarrhea and nervous symptoms rapidly disappeared. She gained 20 pounds in ten weeks and at that time stated that she felt better than she had in five years. The patient made an uninterrupted recovery and has had no return. It is now *eight months* since the operation.

Case 9.—The patient, a white woman, aged 36, referred by Dr. McMillan, Jones Mills, Ala., with *chronic pellagra*, had had severe attacks of diarrhea every spring for six years. Eighteen months before coming under our observation the patient developed a pellagrous eruption over the backs of both hands, associated with stomatitis. Four months before examination there was another attack of severe diarrhea associated with stomatitis and marked *mental symptoms*. Four weeks before examination the diarrhea and stomatitis reappeared, and the mental and nervous symptoms became exaggerated to a mild form of dementia. On examination the patient presented a desquamating skin lesion over the backs of both hands and forearms. There were asthenia, marked emaciation and anemia. Reflexes were increased; mental depression and at times hallucinations were present. Weight was 74 pounds; average weight over 100 pounds; hemoglobin, 70 per cent. Transfusion was done Oct. 18, 1909. The donor had never had pellagra. Twenty-four hours after the operation the patient showed marked improvement in the mental condition. The symptoms of pellagra rapidly disappeared and the patient gained 7½ pounds in the first week. The patient went on to a perfect recovery and has constantly gained in weight. There have been no return of pellagra symptoms; it is now four months since the operation.

Case 10.—The patient, a white woman, aged 43, referred by Dr. Eley, Merrill, Miss., with acute pellagra, had had an acute attack of diarrhea two months before coming under our observation; this proved intractable and was soon followed by stomatitis and a pellagrous eruption over the backs of both hands. There was a progressive emaciation and anemia. The eruption spread to the face. Severe mental symptoms developed ten days before examination. On examination the patient was found to be profoundly emaciated. An eruption extended over the backs of both arms and hands. Stomatitis, mental depression and delirium were present. The reflexes were increased; there was a severe diarrhea. Hemoglobin was 60 per cent. Transfusion was performed Nov. 3, 1909. The donor had never had pellagra. Although there was a good flow of blood there were no signs of improvement and the patient died seven days after the operation.

Case 11.—The patient, a white woman, aged 51, referred by Dr. Haley, Houston, Texas, with chronic pellagra, had complained of indigestion eight months before the operation. There was progressive loss of weight, profuse diarrhea, and anemia. Hemoglobin was 60 per cent. three months before the operation. Four months before coming under observation a stomatitis appeared. Shortly afterward a pellagrous eruption appeared over the backs of the hands. At this time there was a profuse diarrhea. The mental condition was that of a depressive melancholia. Reflexes were increased. At examination, marked emaciation, asthenia, increased reflexes a depressive melancholia, signs of myocarditis, and remains of a pellagrous eruption were present. Hemoglobin was 60 per cent. Transfusion was performed Dec. 22, 1909, at Houston, Texas. The donor had never had pellagra. Although there was a good transfusion of blood the patient showed no signs of improvement and died nine days after the operation.

CONCLUSIONS

1. In certain severe cases of pellagra resisting all forms of medical treatment, transfusion has been followed by recovery with no relapse.

2. The patients recovering showed marked improvement from the first; in the fatal cases there was no benefit from transfusion.

3. Transfusion is of undoubted value in certain severe and apparently hopeless cases; but without a thorough knowledge of the technic of transfusion and without a careful selection of the cases and donors it will be brought into an undeserved ill repute.

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ANIMAL EXPERIMENTATION IN RELATION TO PROTOZOAN TROPICAL DISEASES*

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The investigations of Pasteur[1] proving that the disease of silkworms known as pebrine is due to infection by a living agent had the immediate practical result of restoring the languishing silk industry of France and Southern Europe, and also produced the greatest interest by the demonstration that disease can be produced in animals by infection with a microbe. The fact that the infectious agent is a protozoon received little attention, and for many years following Pasteur's discovery bacteria furnished the main object of medical investigation; only recently have numerous researches begun to reveal the frequency with which protozoa occur as parasites in man and the lower animals.

But if the expansion of the subject of parasitic protozoology is recent, the recognition of the tropical diseases, as a separate group, is even newer, and, in spite of the extremely rapid growth of our knowledge of these diseases, we must still regard the subject as relatively undeveloped. This being the case, the results obtained from experiments and investigations in tropical protozoology are to be regarded as hardly more than foreshadowing what may be expected from further research.

ANIMAL STUDY UNAVOIDABLE

In considering the part played by animals in the development of our knowledge of tropical diseases of protozoan origin, several lines of thought present themselves. In the first place, the parasites causing these diseases are themselves members of the animal kingdom, and the study of any of them involves a measure of animal experimentation. In the second place, in many instances the protozoan parasites causing diseases are carried from one individual to another by insects. The study of the insect carriers of disease and of the life history of the parasite in the insect again involves a certain sort of animal experimentation, the insect being the subject of experiment. Furthermore, most of our information concerning the protozoan parasites has been acquired from studies of protozoa spontaneously infecting the lower animals, and studies of these infected animals may be classed as animal experimentation. Finally, laboratory inoculations of protozoa into healthy animals have been made with varying success. This article will deal mainly with the two last-mentioned groups of animal studies, but it will be necessary to include clinical and zoologic researches in order to give a connected account of the progress in our knowledge.

The tropical protozoan diseases have become recognized as a group only after many independent and apparently unrelated studies. The circuitous course of these studies may be suggested by mentioning a few of the important ones, such as those of Pasteur, in France, on pebrine; of Lösch, in Russia, and Kartulis, in Egypt, on amebic dysentery; of Laveran, in Africa, on malaria; of Smith and Kilborne, in the United States, on ticks as carriers of Texas fever; of Evans, in India, and Bruce, in Africa, on trypanosomiasis in animals; of Ross, in India, on the transmission of malaria by mosquitoes; of Dutton and Todd, in Africa, on sleeping sickness, and of Schaudinn, on the identification and properties of numerous protozoa.

AMEBIC DYSENTERY

The principal facts relating to amebic dysentery with which we are acquainted have been learned from clinical and pathologic studies. Owing to the difficulties encountered in growing the amebas and in reproducing the disease in lower animals in a manner which excludes the possible action of bacteria, there are a few who still find room for doubt as to the exact relation of amebas to human disease, although most authorities accept it as proved that at least one type of ameba produces dysentery in human beings.

Lambl observed amebas in human fecal matter, but they were not regarded as pathogenic until Lösch[2] described the ameba and the disease now known as amebic dysentery. After administering amebic discharges to four dogs, by mouth and rectum, Lösch found amebas in the stools of one of them, in whose rectum also there were numerous amebas accompanying inflammatory and ulcerative changes. Lösch could not assign a specific etiologic rôle to the amebas, but thought it probable that they played a secondary part in producing the disease. The intestinal bacteria complicated the experiments, which were all the more difficult, since the amebas could not be grown in pure culture and their specific action be observed.

Clinical and pathologic reports, such as those of Osler,[3] Stengel, Musser, Dock, and Councilman and Lafleur,[4] established amebic dysentery as a clinical entity, but amebas were nevertheless frequently found in the stools of persons free from any symptoms of dysentery. Kartulis,[5] stimulated by certain observations made during Koch's cholera expedition to Egypt, made a careful study of the dysenteric conditions in Alexandria. From a study of over 500 cases, he concluded that amebas are responsible for a characteristic form of dysentery, and that they are also the cause of the liver abscesses often complicating the disease. Kartulis did not succeed in his early attempts to produce experimental amebic dysentery in monkeys, cats, dogs, rabbits and guinea-pigs, but later produced typical forms of the disease by giving to young cats rectal injections of amebic discharges. He also claims that he grew amebas from liver abscesses in pure cultures in straw infusion, and with these cultures successfully inoculated cats, the animals dying from a typical amebic dysentery. Inoculation with bacteria and with dysenteric stools freed from amebas never caused dysentery in his experimental animals. No other experimenters have been able, however, to repeat Kartulis' experiment of growing amebas in pure culture, although Kruse and Pasquale have produced dysentery by injections of ameba-containing pus from liver abscesses.

MODE OF INFECTION

Although human beings probably never receive infection through the rectum, Kartulis' experiments at least placed the subject on a more substantial basis, and subsequent experiments have shown that amebic dysentery can result after swallowing amebas. The ordinary, free and unprotected amebas fail to produce the disease after being swallowed, as they are destroyed in the upper part of the digestive tract by the digestive juices. Under certain conditions, however, the amebas become encased in cysts, which protect them from the digestive juices and other injurious agents. In this encysted condition amebas can pass through the stomach and upper intestine unharmed, and on arriving at the lower part of the intestine can grow out into the usual free form and give rise to amebic dysentery. That encysted amebas taken by mouth can set up amebic dysentery was shown, in the case of human beings, by Calandruccio, and, in the case of animals, by Quincke and Roos,[6] Kruse and Pasquale,[7] H. F. Harris,[8] Jürgens,[9] Musgrave and Clegg,[10] and others. As a further proof of the specific action of amebas, Harris, in dogs, and Marchoux,[11] in cats, which survived the infection for fifteen or sixteen days, observed the development of liver abscesses—a very dangerous and characteristic complication met with in human beings suffering from chronic dysentery.

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* This article is one of a series issued in pamphlet form by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Twelve of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, internal secretions, surgery, protozoan tropical diseases, etc.

[1] Pasteur, L.: Rapport, etc., relativement a la maladie de vers a soie, Paris, 1868; Pasteur, L.: Etude sur la maladie de vers a soie, Paris, 1870

[2] Lösch: Virchows Arch. f. path. Anat., 1875, xlv, 196.

[3] Osler: Bull. Johns Hopkins Hosp., 1889, i.

[4] Councilman and Lafleur: Johns Hopkins Hosp. Rep., 1891, ii.

[5] Kartulis: Centralbl. f. Bakteriol., 1891, ix, [illegible]03.

Although clinical and pathologic observations and the experiments referred to would seem to establish the fact that the ameba is a disease-producing agent, the question was far from being closed. Many experimenters failed to confirm the results just outlined, and in addition the conditions of some of the experiments were too severe to make the positive cases convincing. Moreover, forms of infectious dysentery occur in which amebas are not present. Light was thrown on this group of cases by Shiga's demonstration of a bacillus as the cause of numerous cases of epidemic dysentery. The widespread occurrence of dysenteries of bacterial origin has been shown by reports of Flexner, Strong, Lentz, Kruse and many other writers all over the world.

Again, it has been found that amebas are frequently present in the stools of persons who have no symptoms of dysentery; Schaudinn finding them in the stools of from 20 to 66 per cent. of non-dysenteric persons. This has led to the view that there are various kinds of amebas, or that there is at least one pathogenic ameba and at least one harmless type. Most writers hold to the view that there are at least two types, and, while many believe that the types can be differentiated by their microscopic appearance,[12] Musgrave and Clegg maintain, as the result of their experiments, that there is no ready means of distinguishing harmless amebas from those that produce disease, and intimate that all amebas are pathogenic. Schaudinn[13] has helped to clear up the situation by showing that there are at least two types of intestinal amebas, distinguished by differences in their manner of growth and reproduction, and his classification and conclusions based on the differences in the life of the two amebas are the ones generally accepted at the present day.

FURTHER STUDY OF AMEBAS

The anatomic changes produced by amebas have been studied in man, but the early and significant stages of the diseases can be seen only in experimental animals. The manner in which the amebas penetrate into the intestinal glands and lead to destruction of the tissues has been described by Jürgens, Quincke and Roos, H. F. Harris and Kruse and Pasquale.

While studies on man and animals indicate that the ameba produces a dangerous disease, there are still many problems remaining unsolved. The conclusions of Schaudinn must be confirmed; the various pathologic and non-pathologic conditions in which amebas occur need further study; although amebas have been found in the mouth and in abscesses of the jaw, and spontaneous amebic disease has been found in animals (Strong), the characteristics of these parasites and the number of species of pathogenic amebas should be established. We know very little at present of methods of protection against this infection and very little of the life of parasitic amebas outside of the body. In the elucidation of such problems—all connected with the welfare of human beings—animal experimentation will almost certainly be necessary.

TEXAS FEVER AND ALLIED DISEASES

In 1891-2 Smith and Kilborne[14] discovered and proved that Texas fever, a destructive disease of cattle, is due to infection of the blood by a minute pear-shaped parasite, often occurring two by two in the blood corpuscles, and named by them *Pyrosoma bigeminum.*[15] Smith and Kilborne performed a work of epochal importance. Not only did they discover the cause of Texas fever, but they explained how it happened that the disease was spreading gradually northward over an ever-widening area. At a time when the relation of insects to disease was hardly suspected, they proved that the parasite of Texas fever is taken up by ticks which bite the diseased animal. The tick, when gorged with blood, drops off and lays an enormous number of eggs which harbor the infection. The eggs develop into young forms of tick, which die unless a chance is offered to suck blood. If the larval ticks have a chance to feed on cattle which have come from a region free from Texas fever, the disease is transmitted to the cattle. It was through the agency of infected ticks' eggs that Texas fever was slowly being carried northward over the country. This series of experiments furnished the first proof that blood-drawing vermin, such as ticks, can be carriers of a microbic disease, and thereby brought to light a method of infection hardly dreamed of previously, but now known to be characteristic of a large group of protozoan diseases.

Several other diseases caused by parasites of this genus have been discovered in sheep, in dogs, in horses, in rats, in monkeys, in goats and asses, and a similar disease in man has been described. A great many experiments have been undertaken with the parasites of these diseases in attempts to gain a clear knowledge of the different stages in their development and of the peculiar mechanism by which the diseases are spread, but the problems have not yet been thoroughly elucidated.[16] These parasites have been grown by Miyajima[17] and Martini;[18] nevertheless their characteristics must be studied in the living body, and it is clear that progress in understanding diseases of this type and in combating them cannot be expected except through the employment of animal experimentation. Without referring to the direct bearing of Smith and Kilborne's experiments on the cattle-raising industry, it may be pointed out that their work furnished a clue of crucial importance in a flood of investigations on other diseases, which already have been, literally, of inestimable value to human welfare.

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[6] Quincke and Roos: Berl. klin. Wchnschr., 1893, xxx, 1089.

[7] Kruse and Pasquale: Ztschr. f. Hyg. u. Infectionskrankh., 1894, xvi, 142.

[8] Harris, H. F.: Virchow's Arch. f. path. Anat., 1901, lxvi, 67.

[9] Jürgens: Ztschr. f. exp. path. u. Therap., 1907, iv, 769.

[10] Musgrave and Clegg: Pub. of the Bureau Govt. Lab., Biol. Lab., Manila, P. I., 1904, No. 18; Musgrave and Clegg: Philippine Jour. Sc., November, 1906, i, 909-950. [Musgrave and Clegg have found that amebas can be grown in cultures, if suitable bacteria are growing on the same culture media. They obtained growths of amebas from raw vegetables, water, and dysenteric discharges, and report that they produced abscesses and various amebic infections with cultures from all sources.]

[11] Marchoux: Ann. d'hyg. et de méd. coloniales, 1900, iii, 129.

[12] Craig: Jour. Infec. Dis., 1908, v, 324.

[13] Schaudinn: Arb. a. d. k. Gsndhtsamte., 1903, xix, 547.

[14] Smith and Kilborne: 8th and 9th Ann. Rep. of Bur. An. Indust. U. S. Dept. Agric., 1891, 1892, pp. 177-305.

[15] There has been much discussion over the name of this parasite. It is most widely known as *Piroplasma bigeminum,* but it is now claimed that according to the rules of nomenclature, *Babesia bovis* displaces the name given by Smith.

[16] The recent works on this subject are excellently reviewed in Calkins' Protozoology, 1909.

[17] Miyajima: Philippine Jour. Sc., Sec. B, May, 1907, No. 2, ii, 83.

[18] Martini: Philippine Jour. Sc., Sec. B, June, 1909, No. 3, iv, 147.

MALARIA AND ALLIED DISEASES

In order to gain any conception of the immense change that has been brought about by studies on malaria it is necessary for us to contrast the prevalence of the disease to-day with that of twenty-five or thirty years ago, and to take note particularly of the attitude of mind which commonly prevailed in regard to it. The present improved state of affairs, in which malaria is being successfully combated and has been made a preventable disease, is the outcome of protracted studies of apparently disconnected matters, such as microscopic studies of the blood of malarial patients; inoculation experiments on animals, and even on man; the study of blood diseases in birds, field mice and other animals; the study of the classification, anatomy, distribution, habits, breeding-places and life-histories of mosquitoes. From such varied sources contributions have accumulated until most of the former mysteries connected with malaria have disappeared, and there are now few diseases concerning whose origin and spread we have such clear knowledge.

LAVERAN'S DISCOVERY OF PARASITES

When Laveran[19] first described the malarial parasites, in 1880, the attention of the medical world was beginning to focus on bacteria as disease-producing agents, and it was several years before the importance of Laveran's discovery was recognized and its accuracy established. However, the work of the Italians, led by Marchiafava and Celli and Grassi, and of American clinicians such as Osler and Thayer, soon placed beyond question the fact that the bodies described by Laveran are parasites and that they are present in the red-blood corpuscles of patients suffering from malaria. In the flood of investigations made on the blood of malarial patients, it was soon learned that healthy human beings can be infected by inoculating them with malarial blood,[20] and that there are several types of malarial parasite, producing different effects in man. One, the parasite of tertian malaria, causes chills every other day; a second causes chills at 72-hour intervals (quartan malaria); a third causes irregular chills and is responsible for what is known as pernicious or tropical malaria. These types can be distinguished from each other by microscopic examinations.

LIFE CYCLE OF PARASITE

Golgi,[21] during 1885-6, traced the stages in the growth of the quartan and tertian parasites from the time that the minute form enters the red-blood corpuscles, through different periods of development, up to maturity, when the full-grown form divides into segments, each of which enters a fresh red corpuscle to repeat the process. He showed that the malarial chill corresponds to the time when one generation of full-grown parasites is simultaneously segmenting. In 1891 Marchiafava and Celli made a similar study of pernicious malaria. About this time Danilewsky[22] investigated a number of warm-blooded and cold-blooded animals and found several kinds of blood parasites, among them one in birds which resembles that of human malaria.

MOSQUITO AS A CARRIER

The works referred to established a relationship between the parasite found in the blood of human beings and the disease, and the occurrence of a similar parasite in birds, but there was no clue to indicate where the parasite came from nor how it got into the blood, nor was there any generally accepted explanation of the mode of infection.[20] It is true that Laveran supposed that the mosquito was concerned in some way in this transfer, and that this idea occurred independently to Manson, who had found mosquitoes active in the spread of a blood disease caused by a minute parasitic worm (*Filaria bancrofti*).[23] Manson suggested that the malarial parasites were carried by mosquitoes from malarial patients; that the mosquitoes infected drinking-water, which in turn carried the parasite to susceptible persons. Bignami also supposed that the malarial organism passed part of its life in the external world, where mosquitoes in some way picked it up and inoculated the human being in the act of biting him. The mosquito hypothesis, however, lacked support until 1895, when Major Ronald Ross,[24] a medical officer in the Anglo-Indian service, observed that the malarial parasites, taken from a patient into the stomach of a mosquito, underwent interesting changes, with the production of flagellated and spherical forms, which were subsequently found by MacCallum[25] to be sexual forms of the protozoon. In many attempts to continue the study Ross failed until he employed a special type of mosquito, now known to be the *Anopheles*, with which he confirmed his previous finding. Directing his attention to bird malaria, Ross discovered that if certain types of mosquitoes suck blood from infected birds, the parasite, *proteosoma*, enters the mosquito, passes through an elaborate cycle of changes, and after about 9 days develops into forms which accumulate about the proboscis of the mosquito and are discharged into the next bird attacked by the insect, to reproduce the disease afresh. Ross succeeded by this means in infecting healthy birds.

The bearing of Ross' discovery on the problem of human malaria was apparent, and immediately the study was taken up by the Italian workers who proved that the mosquito plays the same rôle in this disease as in bird malaria. In arriving at this result, the study of malarial diseases of field mice and lower animals and a painstaking study of mosquitoes by Grassi, played a part. The chief workers among the Italians were Grassi, Bignami and Bastianelli.[26]

CYCLES OF GROWTH AND REPRODUCTION

From these investigations it developed that the malarial parasites have two cycles of growth and reproduction: in the warm-blooded animal reproduction is asexual; in the mosquito sexual reproduction occurs. Both cycles are necessary for the perpetuation of the malarial parasite. At this point in the investigations it became urgently necessary to determine whether any other animal resembles man in its capacity to harbor the malarial parasites. Experiments on this point were perfectly uniform in their results;[26] neither by inoculation of ani-

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19. Laveran: Bull: de l'Acad. de med., Paris. Nov. 23, 1880, ix, 1235; Laveran: Compt. rend. Acad. d. sc., 1881, xciii, 627.

20. Thayer and Hewetson: Johns Hopkins Hosp. Rep., 1895, v, 35-39 and 53.

21. Golgi: Arch. p. le sc. med., 1885, No. 4; Golgi: Gaz. d. osp., 1886, No. 53.

22. Danilewsky: Ann. de l'Inst. Pasteur, 1890, No. 7, pp. 427, 733.

23. King: Insects and Diseases; Mosquitoes and Malaria, Pop. Sc. Month., 1883, xxiii, 644.

24. Ross: Lancet, Dec. 18, 1897, and Feb. 26, 1898; Ross: Ann. de l'Inst. Pasteur, 1899, No. 2.

25. MacCallum: Jour. Exper. Med., 1898, No. 1, iii, 125.

26. Grassi: Bignami, Bastianelli, Dionisi, etc., Rev. Acad. del Lincei, Nov. 28, 1898 to May 1899; Reviewed by Ziemann: "Malaria" Mense's 'Handb. d. Tropenkrankh.,' iii, Parts 1 and 2.

mals nor by having them bitten by infected mosquitoes was it possible to cause the parasites of human malaria to grow in their blood. The uniformity of these results gave assurance that the lower animals do not suffer from human malaria and that they are not concerned in the spread of the disease. It may be remarked, however, that diseases resembling malaria, but specific for certain types of lower animals, have been observed by Kossel, Ziemann, Koch and Vassall.

ANOPHELES MOSQUITO

The adjustment of the malarial parasites to their environment is very delicate; a certain stage of the parasite of human malaria will survive and multiply in mosquitoes of the genus *Anopheles,* but will not survive in other mosquitoes; the parasite of bird malaria will not survive in *Anopheles* mosquitoes, but survives and multiplies in *Culex* mosquitoes. The parasites of bird malaria do not live in human blood, even if introduced artificially or by an infected *Culex* mosquito, and the parasites of human malaria cannot live in other animals. Various other mosquitoes have been found to be capable of carrying malaria to human beings, nearly all being of the genus *Anopheles,* and it is now known that many genera of mosquito are quite incapable of carrying the disease.

It has been proved that the mosquito is not simply a passive carrier of the malarial parasite, but that the parasite invades the tissues of the mosquito and passes through certain complicated stages of development before arriving at a condition in which it is capable of infecting a fresh human subject. The changes which the parasite undergoes in the mosquito are apparently essential to the continued existence of the parasite, and we must conclude that the malarial organism is regularly parasitic for two living creatures—man and the *Anopheles* mosquito, and that it can continue to live and multiply only when it can occasionally pass from one of these hosts to the other and back.

The complicated and elaborate stages in the development and reproduction of the malarial parasite, both in man and the mosquito, have been worked out step by step. Grassi,[26] in 1901, studying pernicious or estivo-autumnal malaria; Schaudinn,[27] in 1901, the form causing tertian malaria. Schaudinn observed the parasites obtained from the proboscis of the mosquito enter human red-blood corpuscles, and thereby completed the chain of evidence required to prove conclusively that the mosquito parasite is the cause of human malaria.

DISAPPEARANCE OF MALARIA

The application of the facts learned by these studies has led to most remarkable changes in modern life. As soon as it became clear that man cannot acquire malaria except through the bite of a mosquito, and that the mosquito can become infected only by biting a malarial patient, the prevention of malaria and its eradication at once became a problem to be attacked by exterminating *Anopheles* mosquitoes and by preventing them from gaining access to malarial patients.

The salutary effect of the antimosquito campaign in decreasing the death-rate and sick-rate from malaria has quite fulfilled all predictions. The banks of the Suez Canal have become habitable; the Roman Campagna is losing its terrors; the construction of the Panama Canal has been made possible, and life in the tropics has been robbed of one of its greatest dangers, largely through the works of Laveran, Ross and Grassi. Moreover, the knowledge acquired has not only led to an intelligent campaign against malaria, but it has been of value in understanding other dangerous diseases carried by insects.

YELLOW FEVER

It will be recalled that up to a very short time ago the southern and eastern ports of this country frequently were in danger from epidemics of yellow fever. The cause of the disease was unknown, its manner of spread mysterious, its mortality high, and the dread of its appearance was constantly recurring. In 1900, five years after Ross discovered that malaria of birds is transmitted by mosquitoes, an American commission[28] made an elaborate investigation of yellow fever. The disease could not be conveyed by contact, nor by the ordinary channels through which bacterial diseases spread, and experimental animals could not be infected. The blood from patients was inoculated into non-immunes and they promptly developed yellow fever. Mosquitoes of the genus *Stegomyia* were allowed to bite susceptible persons after sucking blood from yellow fever patients, and the disease was transmitted after a number of unsuccessful attempts. The first person on whom this experiment succeeded was Dr. Carroll, one of the members of the commission, and a few days later Dr. Lazear, also a member of the commission, allowed himself to be bitten, contracted yellow fever and died. In spite of numerous and careful attempts, no other method could be found which could be supposed to play a part in the natural spread of yellow fever, and the commission concluded that victims regularly are inoculated from infected *Stegomyia* mosquitoes, a conclusion which has been abundantly confirmed. It has since been shown by Marchoux and Simond that the offspring of infected mosquitoes can transmit a mild form of yellow fever.

The most painstaking investigations have failed to demonstrate the virus of yellow fever, and there is reason to believe that it is too small to be seen even with a microscope. In spite of the fact that the germ of the disease is unknown, the work of the American commission has demonstrated that yellow fever will not spread in a community unless infected *Stegomyia* mosquitoes occur. The truth of this theory has been tested on a grand scale. In Havana the destruction of mosquitoes and the screening of yellow fever patients have relieved the town of the scourge. The same measures proved sufficient in New Orleans some five years ago, and have given equally satisfactory results at Panama.

TYPHUS AND DENGUE

Typhus fever and dengue, two diseases whose virus is still unknown, have been studied in much the same manner. In the case of dengue, Ashburn and Craig[29] concluded that the disease is transmitted by the ordinary *Culex* mosquito; in the case of typhus, Vassall finds that the blood of patients will convey the disease if inoculated into susceptible individuals, but he has not yet determined what biting insect is the carrier.

In 1903 minute bodies were found in the cells of victims of one of the obscure fevers of India, known as "kala-azar,"[30] or "dum-dum fever." This disease, confused with malaria for many years, was finally recognized as one of the scourges of India, where it has practically destroyed villages by its widespread and high mortality. The bodies found by Leishman[31] and Donovan[32] in kala-azar patients appeared to be the infectious agent causing the disease. The studies of Rogers and Patton[33] have shown that this disease also is carried by an insect. It has been found that bedbugs which have bitten patients with kala-azar have the protozoon in their stomachs, and it has been learned that the parasite undergoes development in the insect. Up to the present time the complete life history of the parasite has not been traced, and we do not know what becomes of it, nor how it gains entrance into human beings. The fact that the disease cannot be given to experimental animals increases the difficulties of study.

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[27] Schaudinn Arb. a. d. k. Gsndhtsamte., 1902, xviii, 169.

[28] Reed, Carroll, Agramonte and Lazear: Philadelphia Med. Jour., 1900, vi, 796; Reed, Carroll, and Agramonte: THE JOURNAL A. M. A., 1901, xxxvi. 431.

[29] Ashburn and Craig: Philippine Jour. Sc., Section B, 1907, No. 2, ii, 128.

[30] Leishman: System of Medicine, Allbutt and Rolleston, Part 2, ii, 226.

RESULTS OBTAINED

It can be seen from this brief review that an enormous amount of research work has been devoted to the study of malaria and related subjects during the last thirty years. There can be no doubt that our ideas concerning the nature of malaria and yellow fever, and our practices in dealing with them, have been profoundly modified by the discoveries of research workers. It is equally certain that the workers have been justified by the results attained; waste places have been made habitable; the conditions of human intercourse, welfare and health have been improved, and there has already been an incalculable saving in human life through the preventive measures now so well known. It would be as improper to assert that these results could have been attained just as readily without animal experimentation as to claim that they resulted solely from such experimentation. The use of experimental animals was, however, necessary—just as necessary as the study of sick patients; just as necessary as the study of mosquitoes. It is highly probable that the mastery over malaria and yellow fever would not have been obtained if studies on animals had been done away with thirty years ago.

SLEEPING SICKNESS AND ALLIED DISEASES

As far back as 1841 Valentin described motile protozoa in the blood of salmon. Similar actively moving bodies were found in frogs by Meyer and received from Gruby the name *"Trypanosoma sanguinis."* Little attention was paid to these parasites for forty years, and, although found in the blood of various lower animals, they were not regarded as disease-producing agents. In 1879 Lewis reported the occurrence of trypanosomata in the blood of Indian rats. A short time later Evans discovered parasites of the same character in the blood of animals suffering from the fatal Indian epizootic "surra," and, as the result of his studies, concluded that surra is caused by the trypanosoma. The disease proved uniformly fatal for horses, mules and dogs; camels were much less susceptible, while oxen could recover after inoculation with the parasite.

About 1895 Bruce[34] was sent to study "nagana," a highly destructive disease of animals in South Africa, and found the animals infected with a parasite like that described by Evans in surra. He inoculated horses and dogs with the blood of cattle suffering from nagana and reproduced the disease.

TSETSE FLY THE CARRIER

In attempting to trace the manner in which animals became infected, Bruce was impressed by the fact that nagana has a very definite localization, occurring with frequency in certain regions, being absent from others. It prevailed in regions inhabited by a stinging fly, the "tsetse" fly (*Glossina morsitans*), but did not develop elsewhere. Bruce carried healthy horses, oxen and dogs from the mountains, where there is no nagana, to the tsetse fly country, where some became infected with tsetse fly disease. From these animals he established the fact that fly disease and nagana are the same. Bruce then brought tsetse flies up from the lowlands to the mountains, allowed them to sting animals sick with nagana, and found that for forty-eight hours thereafter the flies could infect healthy animals by stinging them. The importance of the tsetse fly as the agent transmitting nagana was emphasized by finding that the disease could not be conveyed by water, food, contact with sick animals, or other usual channels of infection. In attempting to discover where the disease arises Bruce examined the blood of the wild animals and found that many of them, although apparently in good health, are infected with the parasite of nagana; in other words, the wild animals are a permanent reservoir of infection.

Bruce also concluded that the tsetse fly acts mechanically in carrying trypanosomata, the parasite not developing while within the fly. In his experiments the trypanosoma of nagana proved fatal for most types of monkey, and for horses, mules, donkeys, cattle, dogs, cats, guinea-pigs, rabbits, rats and mice.

OTHER PROTOZOAN DISEASES

Since this discovery trypanosomata have been found to cause a number of widely prevailing diseases in the domestic animals, and experiments show that these diseases can be transferred to many other animals. Furthermore, protozoa of this type have been found widely spread in other animals, fish, etc., in which corresponding diseases have not been established. Of the diseases may be mentioned "dourine," discovered in 1896 by Rouget in African horses; "mal de caderas," discovered in South American horses by Elmassian and Voges in 1901; "Galziekte," discovered by Theiler in African cattle in 1902; and "coast trypanosis of Kamerun," discovered by Ziemann in 1902.[35]

In a surprisingly large number of these diseases it has been established by careful experiments, reinforced by a study of the conditions of spontaneous infection, that the parasite is carried from a sick animal and inoculated into a new victim by the bite of an insect. In the majority of trypanosomatic infections the insect is a biting fly belonging to the genus *Stomoxys* or *Tabanus* or *Glossina.*

Even after diseases caused by trypanosomata were well recognized in the lower animals the parasite was not found in man before the observation of Forde, and in his case there was at the time no proof that disease resulted from its presence. Proof was furnished, however, by Castellani, who found the same parasite in the spinal fluid drawn from a patient suffering from a fatal disease of Africa, known as "sleeping sickness," a discovery soon confirmed and extended by Dutton and Todd.

EXPERIMENTAL STUDY OF SLEEPING SICKNESS

It is impossible here to review the overwhelming amount of experimental work that has been performed in connection with sleeping sickness and trypanosomata during the last few years. Expeditions sent from England, France and Germany, and independent investigators, have been busily occupied with the subject.[36] As the result of investigations in this field it has already been established that trypanosomata are the cause of sleeping sickness; that the human being is infected through the bite of a fly of the tsetse fly type, *Glossina palpalis;* that the fly carries the parasite for five days or more after biting a patient or animal infected with trypanosomata, but can transmit the disease for only two days; that practically all the Glossina flies captured around certain lakes in dangerous districts contain trypanosomata; that the trypanosoma of sleeping sickness is fatal for some lower animals, especially for monkeys, dogs and cats, and can be transferred to them experimentally, while other animals are more highly resistant to the human trypanosoma.

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[31] Leishman: Brit. Med. Jour., May 30 and Nov. 21, 1903, i.

[32] Donovan: Brit. Med. Jour., July 11, 1903, ii, 79.

[33] Patton: Scientific Memoirs by the Officers of the Medical and Sanitary Departments of the Government of India, 1907, No. 27.

[34] Bruce: Osler's Modern Medicine, 1907, i, 460.

[35] Lühe: Mense's Handb. d. Tropenkrankh., 1906, iii, Part 1, 1909.

[36] Thimm, C. A.: "Bibliography of Trypanosomiasis," London,

In addition to the facts just stated, researches have been made to determine what changes are produced in the tissues as the result of trypanosomatic infection, and studies into the mechanism of protection and immunity are already beginning to appear.

PROBLEMS TO BE SOLVED

Many experiments have been made to discover drugs with which to combat this type of disease, with an encouraging degree of success, and already two drugs, trypanred and atoxyl, have become recognized as having a definite value in the treatment of trypanosomatic infections. Other investigations have been made to make clear the complicated changes which trypanosomata pass through during their growth and reproduction; Schaudinn's work deserves special attention in this connection. Upward of a hundred trypanosomata have been described, which differ among themselves, either in structure or habits. It is important to determine how many species we have to deal with; to establish the specific differences; to gain information regarding the variations; so far as possible to determine the conditions under which variation occurs, and especially to obtain a clear knowledge of the manner in which these protozoa live when they are not parasitic in the blood of animals. Many experimental studies have been made which have in view some of the objects mentioned above, and among other important results already achieved a method has been devised by Novy and his colleagues for growing trypanosomata in cultures.

TRYPANOSOMATA WIDESPREAD

Enough has been said to show that diseases caused by trypanosomata are widespread and fatal for many lower animals, and that in Africa this protozoon is exceedingly dangerous to human beings. The problem of conquering these diseases is an immediately pressing problem. The interests involved are enormous, often national or even international. Success in preventing and eradicating these diseases can be hoped for only when preventive measures are based on accurate and detailed knowledge of the parasites and of the insect carriers. In attaining this knowledge it is necessary to study the sick animals, the climatic and geographical peculiarities, the distribution and habits of insects, and, above all, to study the parasites themselves. It is folly to assert that this knowledge can be gained equally well without animal experimentation. There is hardly a line of research on trypanosomata that does not require animal experimentation at one point or another. Without animal experimentation, progress in combating diseases of this group would practically cease.

CONCLUSION

It may be well, in conclusion, to try to stand to one side and view critically the experimental work that is briefly summarized in this article; to face frankly the possible charge of inhumanity and cruelty and to face equally frankly the obvious motives of the experimenters, and the results aimed at and actually accomplished. Without doubt, to one not interested in zoology and out of touch with the ideals of investigation and research, it might seem wanton cruelty to capture field mice and wild birds and to study the blood of these creatures for parasites. There might well have been no obvious connection whatsoever between such examinations and human progress. But if studies like those of Danilewsky, MacCallum and Ross had been prohibited on the ground of cruelty, it is not improbable that the ravages of malaria would be yet unchecked. The wonderful revolution brought about by the discovery that yellow fever is carried only by the mosquito was almost directly a sequel to the malaria work, and it requires no great stretch of the imagination to suppose that if animal experimentation had been forbidden the world would to-day be as powerless as ever in the fight against these two scourges.

Again, there is no question that many animals have been sacrificed in experiments connected with Texas fever, surra, nagana and similar diseases. These diseases do not even attack human beings, and, therefore, in this group of cases, we do not have to balance the value of a human life against that of an animal. The motive animating the experimenters is perfectly clear and cannot be interpreted except in one way by any one who chooses to weigh the evidence. For example, no flight of imagination could go to the point of supposing that Bruce was sent out to South Africa in order to perform brutalizing experiments, or that he would have gone for any such purpose. It is so obvious that it sounds puerile to state that Bruce's mission was to learn to master nagana and to put a stop to its ravages among live stock. The question may be raised, "Was Bruce justified in sacrificing some animals in his experiments on the chance of thereby gaining information that might be used in saving the lives, or of improving the condition of great numbers of other animals?" There can be only an affirmative answer to this question, so far as economic interests are concerned, and even from the viewpoint of a strict opponent of animal experimentation it might seem proper to save the lives of many animals by the sacrifice of a few. The opposite attitude would, in fact, be both foolish and cruel, as it would disregard the welfare of the great majority of the animals. And yet if once it be admitted that animals may be sacrificed for the welfare of other animals the whole attack against animal experimentation collapses, for surely human progress and human welfare are objects as worthy as the welfare of the lower animals.

ARTIFICIAL VAGINA BY INTESTINAL TRANSPLANTATION

J. F. BALDWIN, A.M., M.D.
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COLUMBUS, O.

In the *Annals of Surgery* for September, 1904, I described an operation which I had devised, and the feasibility of which I had demonstrated on the cadaver, for the establishment of an artificial vagina in cases of acquired or congenital absence of that organ, by transplanting a loop of intestine. A very thorough examination of the literature of artificial vagina had been made for me by an expert connected with the Library of the Surgeon General's Office, and the operation suggested was found to be entirely unique.

Three years later, having had an opportunity to employ this method. I reported[1] the case in full at the twentieth annual meeting of the American Association of Obstetricians and Gynecologists. I have now had four of these cases and can recommend this method of operating to the profession with very great confidence.

Patient.—My fourth case was in a young woman, aged 18. She had always enjoyed excellent health, but had never menstruated, nor had she experienced any menstrual molimen. She was brought to me in the spring of 1909, but as she had just graduated from high school I made no examination but encouraged the mother to delay, thinking that the amenorrhea would disappear with improved nutrition; and I directed outdoor life and vigorous exercise. This failing to accomplish the desired result the patient was again brought to me, August 20, and I then made an examination. (I had previously operated on this patient, once for appendicitis, making the usual McBurney operation, and once for left inguinal hernia, the hernia containing the ovary. The ovary was replaced, and the parts closed in the usual way, but the patient was a mere child and no examination of the pelvic organs was thought of.)

Examination.—There was found complete absence of the vagina, its presence not being indicated even by so much as a dimple. Rectal examination was somewhat unsatisfactory, but was absolutely negative as to the existence of uterus or ovaries. I advised examination under an anesthetic, and this was done on the following morning. I could then by the rectum make out an irregular mass in the right side of the pelvis, but the character of this could not be determined. I supposed it to be either the right ovary or an imperfectly developed uterus. It was considerably larger than a normal uterus, so that if it represented that viscus it would probably be found that the increased size was due to retained blood. The deformity was carefully explained to the patient and her mother, and the possibilities of making an artificial vagina were discussed at some length. They were both very anxious that the operation should be made, and it was accordingly undertaken August 23.

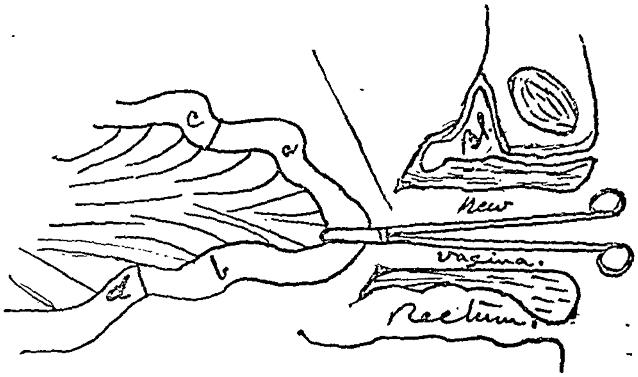

Fig. 1.—Bowel seized by hemostat through opening for new vagina; a, b, sigmoid or ileum; c, d, points for section and anastomosis.

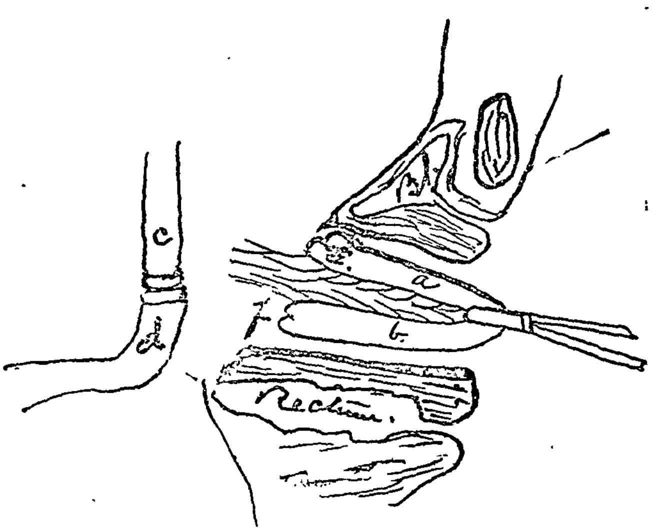

Fig. 2.—Section of bowel (a, b) with mesentery intact, drawn into new vagina; c, d, anastomosis; e, f, closed ends.

Operation.—The perineum and lower abdomen having been prepared, the patient was placed in the lithotomy position and a transverse incision made in the perineum at a point corresponding to the normal opening of the vagina. With an index-finger in the rectum and a sound in the bladder, I carried this dissection forward until the peritoneum was reached. This opening was made amply large, and then lightly packed with gauze pressed in around a large hemostat, which was introduced so as to expedite the second step of the operation. The patient was then placed in the horizontal position, and the abdomen opened in the median line. It was then found that the mass in the pelvis, which had been previously made out, was behind the peritoneum. I at once passed my hand up and found, as suspected, an entire absence of the right kidney, and then a little more investigation showed that this tumor was the kidney congenitally misplaced. Not a trace of the uterus could be found. (In two other cases which I have had of congenital absence of the vagina the uterus was represented by a small bit of tissue, about the size of the end of the little finger, on each side in close proximity to the ovaries.) The ovaries were normal, but were found on each side much higher up than usual. To each one was connected a small bit of Fallopian tube, like a plume on a lady's hat. On the right side was a very imperfect round ligament, but no trace of any on the left. The field of operation having been protected by gauze sponges, the lower end of the ileum was brought up, the intestinal contents displaced for about 12 inches, and this portion of bowel resected but with careful preservation of the mesentery. The ends of the resected section of bowel were inverted with purse-string suture, and the other ends connected to each other by a Murphy button so as to reestablish the continuity of the canal. I had left just enough of the lower end of the ileum attached to the colon to enable me to make this anastomosis. The peritoneum over the vagina was then opened, exposing the hemostat, which was then pushed on into the pelvis by an assistant. The detached bowel was caught at its middle by the hemostat and drawn down into the artificial vagina. The peritoneum was carefully brought together over and around the ends of this piece of bowel, so as to make a smooth floor. The abdomen was then closed in layers in the usual way. The patient being then placed in the lithotomy position, the bowel was opened where it had been caught by the hemostat, each leg of the loop wiped out carefully, and then packed with iodoform gauze so as to press it snugly against the walls of the artificial opening. The edges of the opening into the bowel were caught to the edges of the new vulva, and a small drainage wick introduced at the very bottom so as to take care of any oozing which might take place. (The accompanying illustrations will serve to make clear the text.)

Postoperative History.—The patient went through the operation very nicely and made an absolutely uneventful recovery, the button coming away in two weeks. She returned to the hospital some weeks later, when the septum was removed in the usual manner, and at this time an ordinary examination would fail to reveal anything abnormal about the vagina, except the absence of a uterine cervix.

While studying the technic of this operation from a theoretical point of view, I took pains to examine the ileum and sigmoid in a large number of patients on whom I was making ordinary abdominal operations. Several hundred patients were thus examined, and in all I found that there would be no difficulty in drawing down such a loop of ileum into the vagina, or a loop of sigmoid if for any reason the ileum should not be found satisfactory. With either

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1. Am. Jour. Obst., lvi, No. 5.

interfered with. I have always used, however, a loop of ileum because resection of the ileum is safer than resection of the sigmoid. In all of my cases operative recovery was absolutely smooth, and the new vagina seems to take the place very satisfactorily of the natural organ. I was induced to use the bowel for this purpose because a very extended study of the literature of artificial vaginas had shown that in cases of entire absence all other methods resulted in almost complete failure, although full of promise in many cases when the patient left the operating-table. The favorite method of operating had been by transplantation of pieces of skin, to line the artificial canal. In all of these cases, however, to the reports of which I had access, the ultimate results had been very unsatisfactory owing to cicatricial contraction. By the use of the bowel a normal mucous membrane is provided, surrounded by normal connective and muscular tissue, and with an ample blood-supply. Theoretically and practically, therefore, such a vagina would seem to fulfil to the highest degree all the requirements.

The dangers of operation are simply those inherent to any other deliberate resection and anastomosis of intestine; but the operation is one which should certainly not be undertaken by a tyro in surgery. My first operation took over two hours, the last one about half that time, and I think that in an uncomplicated case the operation should be made within the hour. There is, of course, no hemorrhage to amount to anything, and if the field of operation is carefully protected there should be no shock. The danger, therefore, would be merely the danger of a possible infection from the intestine, and that danger in the hands of an expert is very slight. Nevertheless, the danger should be fully explained to the patient, who would then decide whether the operation would be worth while.

In addition to the four cases of my own, a successful operation has been reported by Mueller[2] and one by Mori.[3] Thus we have six successful cases with no mortality. (So far as I can learn neither Mori nor Mueller refer in any way to my own previous work, although my publications preceded theirs by several years. I understand, however, that such a failure to give credit is in certain foreign medical circles not looked on as either unethical or dishonorable).

115 South Grant Avenue.

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[2] Mueller, A.: Formation of Vagina from Loop of Small Intestine, München med. Wchnschr., Dec. 21, 1908; abstr. in The Journal A. M. A., Jan. 29, 1910, liv, 419.

[3] Mori M.: Zentralbl. f. Gynäk., Jan. 1, 1910; abstr. in The Journal A. M. A., Feb. 12, 1910, liv, 577.

TORSION OF THE GREATER OR GASTROCOLIC OMENTUM

COMPLICATED BY ACUTE APPENDICITIS

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So very little is really known of the mechanical cause of the twisting of the omentum that the report of this case is interesting and may serve to throw some light on the subject.

Less is known of the symptom-complex leading to a correct diagnosis of such torsions. This is demonstrated by the fact that in some sixty odd cases recently collected, extending over a period of twenty-seven years since 1882, when the first report was made by Oberst, only one case was diagnosed as such before the operation.

Corner and Pinches lead one to be satisfied with a diagnosis at the operating table and not a differential one beforehand.

Fuller points out the difficulty of diagnosis and says that it is not at all remarkable or strange for a torsioned omental tumor to escape detection even during a laparotomy, unless the incision happened to be made directly over the tumor.

Richardson suggests an anatomico-pathologic classification according to the point of twisting, and asks for a report of all cases with an explicit statement as to the location of the tumor and the point of torsion. He thinks that if the possibility of torsion of the omentum be kept in mind in all cases of abdominal symptoms pointing to a strangulation a preoperative diagnosis of torsion of the omentum would become more frequent.

Weiner offers the very practical suggestion that if we cut down on a hernia that produced symptoms of strangulation and find only a strand of omentum in the canal we should investigate the intra-abdominal portion of the omentum to make sure that there is no torsion present.

Patient.—H. P. F., foreman by occupation, 32 years old, was admitted to my service at the Harlem Hospital, June 14, 1906.

Previous History.—The patient had an attack similar to the present one two years ago, from which he recovered. He was operated on ten years ago for right inguinal hernia.

Present Illness.—Two days previous to admission he was seized with very severe pains in the right iliac region, which continued unabated up to that time. He had been constipated since the beginning of the attack. There was no vomiting. He was in great pain on admission. His temperature on admission was 103 F., pulse 120, respiration 26.

Physical Examination.—General appearance—a well-developed, conscious male, very obese. Eyes—pupils contracted but reacted naturally; mucous membrane red and dry; lips scarlet; pulse regular in force and frequency; very rapid; respiration shallow and jerky; abdomen rigid and tense, general tenderness, tympanitis, pain more marked on right side. Urine—albumin with casts, hyalin, granular and epithelial. Arteriosclerosis was present. An indistinct mass could be made out to the right of the umbilicus, reaching down into the right iliac region. A cicatrix in the right inguinal region indicated that an operation for hernia had been performed. The wound had apparently healed by primary union, and there was no signs of recurrence. A diagnosis of appendicitis was made. A high leucocytosis and differential blood-count, with the mass and other symptoms suggested abscess.

Operation.—A long incision was made through the deep fascia on the outer edge of the right rectus muscle over the tumor. A quantity of bloody fluid escaped and a large mass of congested and partially strangulated omentum immediately presented itself in the wound, and was found to be adherent beneath the hernial cicatrix by the small thin band of adhesion at the lower end of the specimen seen in the illustration. This and several other small bands of newly formed inflammatory adhesions were easily broken up; as they were so small they were not ligated. The omentum was delivered through the wound and excised near the transverse colon. The appendix, which was found to be very markedly congested, was removed. There were, however, no adhesions between the omentum and the appendix. The abdomen was closed without drainage, and the patient left the operating room in good condition. June 18, four days after the operation, the wound was dressed and was found dry and clean. June 30 the patient was up and well.

Examination of Specimens.—The specimen of the appendix was small; there were no adhesions, though it was markedly congested, but probably not enough to account for the high temperature, pulse and leucocyte count, and surely not for the general congestion and the fluid in the abdomen.

The specimen of the omentum (see illustration) was 17 inches long, weight 9¾ ounces, and had 27 distinct complete twists or turns, the reverse to the thread of a right-hand screw. When partly untwisted it was found that the small band of adhesion to the peritoneal side of the hernia cicatrix.

probably came off from the lower right-hand corner of the omentum. The twists or turns as counted commenced near the attachment of the omentum to the transverse colon and ran all the way down the entire length of the omentum to the small band of adhesion to the hernial cicatrix.

With a few more twists the small band of adhesion would have parted and I should have reported this case as a pure intra-abdominal torsion without adhesions or the presence of a hernia. The result of the hernia operation ten years ago was perfect, and excepting the small spot to which the band was attached the peritoneum beneath the hernia scar was perfectly smooth, as demonstrated by palpation within the abdomen. Evidently a small tip of the omentum had either been ligated with the hernial sac, or the omentum had subsequently become adherent at this point, thus affording a diagonal line from the upper left corner of the omentum at the transverse colon to the lower right hand corner of the omentum, around which the free lower left irregular triangle could and probably did revolve. If the adhesion played a rôle in the torsion it does not seem possible for such adhesion at the lower right border of the omentum to have been present for ten years without giving rise to an earlier twisting. Surely the torsion could not have been present for ten years, for there would have been adhesions between the twists that would have prevented the untwisting, which was fairly easily accomplished. If the adhesion was present for ten years without torsion, then some other force was necessary for its production. Was it the acute attack of appendicitis? The omentum has a habit of enfolding the appendix during certain inflammations. Was it making violent efforts to get to the appendix, or was the twisting a result of a purely exterior force such as the peristaltic wave of the intestines particularly imparted by the ileum, over which the omentum lay, just before it entered the cecum? The ileum at this point being more or less fixed, the propulsive effort is constantly in the same direction from the left to the right, and the direction of the twists in my specimen of omentum are the same as would be expected if this was the case. Now, the twists once started and the resulting inflammation in the omentum commenced, the increasing length of the inflamed veins would themselves tend to wrap around a line between two more or less fixed points. The swelling, edema and extravasation of the blood-cells would for the same reason also augment the twisting force.

Specimen showing torsion of omentum and small band of adhesion at one end.

Now let us go a step further. Nearly every case of reported torsion of the omentum was accompanied by some form of inflammation, either within or without the abdomen, as in a hernia. Was the inflammation the cause or the result of the torsion? The structure of the omentum has for its chief framework its vessels, long thin arteries that come off for the most part from the gastro-epiploic arteries at the great curvature of the stomach, and run downward to the lower border of the omentum, and then turn upward in the posterior layer to anastomose with the arteries of the colon. The veins are about the same. Enlarged full veins have been characteristic of the specimens of torsion of the omentum. Now the veins increase in size and length more rapidly in inflammation than the arteries, and would have a natural tendency to wrap around the latter and carry the loose mesothelium, and may perhaps be the chief factor in the production of torsion of the omentum; and I think also that we can add to this the force of the pulsations of the omental arteries.

I have suggested the foregoing, for I have long felt that the torsion of the omentum was not due wholly to exterior forces, and I believe that we must look for a cause within the omentum itself that would produce or is capable of producing torsion, because in pure hernial torsion of the omentum where the omentum is in contact with only the smooth wall of the sac it seems as if the possibility of an exterior force is negative.

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A DUODENAL TUBE

SECOND COMMUNICATION

M. GROSS, M.D.
NEW YORK

In my first communication on this subject[1] my principal object was to show that a method had been found to pass over the pyloric ring and to reach the upper part of the small intestine. The present communication serves to present the method in greater detail.

The stomach-tube devised by me in 1894 requires only a few special alterations to answer the purpose of obtaining the *duodenal contents.*[2]

Apparatus.—This is shown in Figure 1.—A perforated round metal ball, twice the size of a pea and enveloped by the tube, serves as the end-piece. Attached to the end-piece is a thin rubber tube, not easily collapsible, about 0.2 cm. in diameter 125 cm. in length and graded in divisions of 10 cm. To this is attached a glass receptacle, which is connected by a length of tubing with a mouth-piece to be used by the operator if he aspirates himself, as I prefer doing; otherwise this part can be replaced by an aspirating bulb.

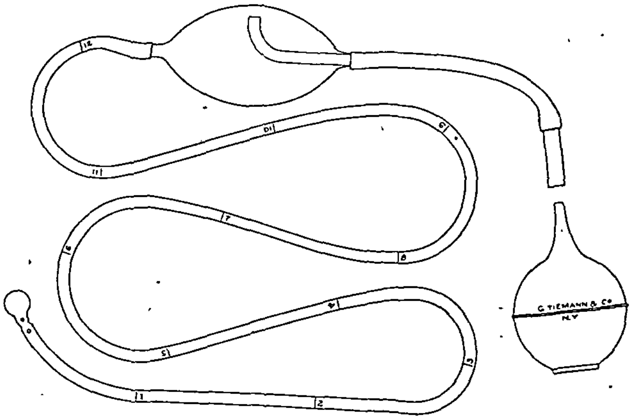

Fig. 1.—Duodenal tube

Anatomy.—Figure 2 speaks for itself, but a few facts concerning the position and size of the duodenum will be in order. The duodenum is the shortest and widest portion of the small intestine and is situated deeper than all the other parts of the intestinal canal. It is not quite 20 cm. long, the ascending portion measuring 4 to 5 cm., the descending about 7, and the horizontal part 6 to 7 cm. Its diameter is 3 to 3.5 cm., except at the pyloric ring, where it is a little less. The direction of the so-called ascending and superficially situated part is left inferior to right posterior. The descending part, which encircles the head of the pancreas in the shape of a semi-circle, receives at its concave side and near the transition into the horizontal part, the common duct of pancreas and liver. The horizontal part rests on the third lumbar vertebra and is the most firmly fixed part of the duodenum, so that in a prolapse of the stomach the pylorus and the descending duodenum will participate most, causing a kinking at the transition point into the horizontal section of the duodenum. The first section of the duodenum is not provided with the folds, the valvulæ conniventes; they are not clearly marked in the descending part, while toward the jejunum they are denser and more prominent. On and between these folds there are the so-called villi intestinales. These villi and the entire mucosa of the small intestine are covered with epithelium which belongs to the cylindrical epithelia and consists of cylindrical and goblet cells. The glandular apparatus of this portion of the intestine consists of Brunner's glands, which are found exclusively in the duodenum, and Lieberkühn's glands, which are found in all parts of the small intestine.

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[1] Gross, M.: New York Med. Jour., Jan. 8, 1910.

[2] Einhorn (Med. Rec., Jan. 1 [illegible] 0 [illegible] similar tube, arranged on the same princip[illegible] [illegible]denal pump. He, however, employs a som[illegible] inserting it.

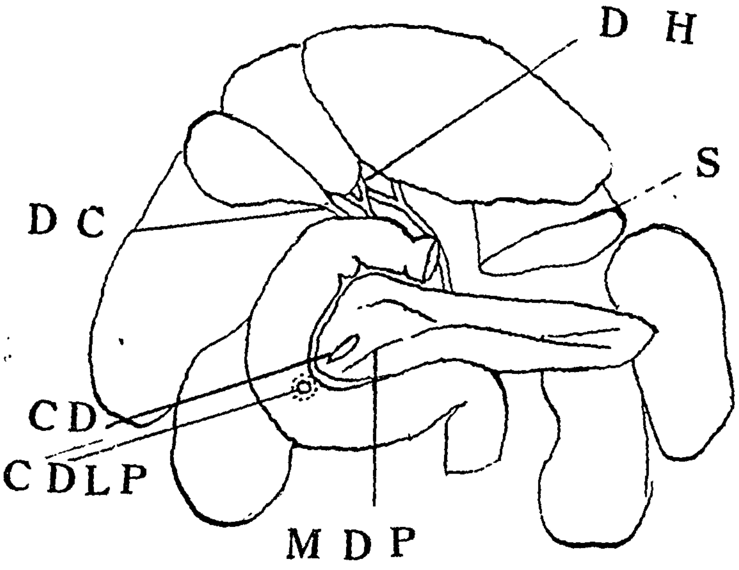


Fig. 2.—Duodenum in relation to other organs; D H, ductus hepaticus; S, stomach; M D P, main duct of pancreas; C D L P, common duct of liver and pancreas; C D, common duct; D C, ductus cysticus.

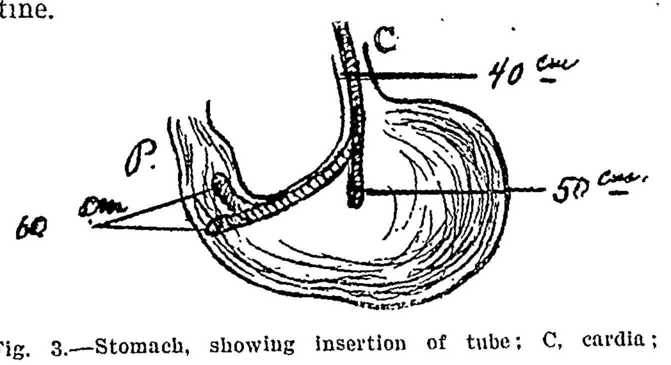


Fig. 3.—Stomach, showing insertion of tube; C, cardia; P. pylorus.

Test Meal.—In the morning the patient is given a test meal consisting of a tumbler (250 gm.) of milk and water in equal parts. This mixture, which cannot cause a great flow of hydrochloric acid, contains enough fat and water to produce an irritation of the mucosa of the duodenum. Half an hour later the duodenal tube is introduced.

Principles of Action.—The fact that the pyloric ring may be reached and passed by the tube is due to the adaptability of the small metal ball, which gradually leads the tube to conform to the lesser curvature of the stomach, and in continuous movements glides into the antrum pyloricum.

Technic of Insertion.—1. Patient swallows the little ball, smoothed with saliva, until the division of 45 cm. has reached the lips. If the patient is accustomed to taking stomach-tubes, there will be no difficulty whatever.

2. Lightly blowing several times into the stomach will smooth it out, so that the tube will hang freely in the cavity (Fig. 3).

3. Patient lies down and slowly turns over on his right side.

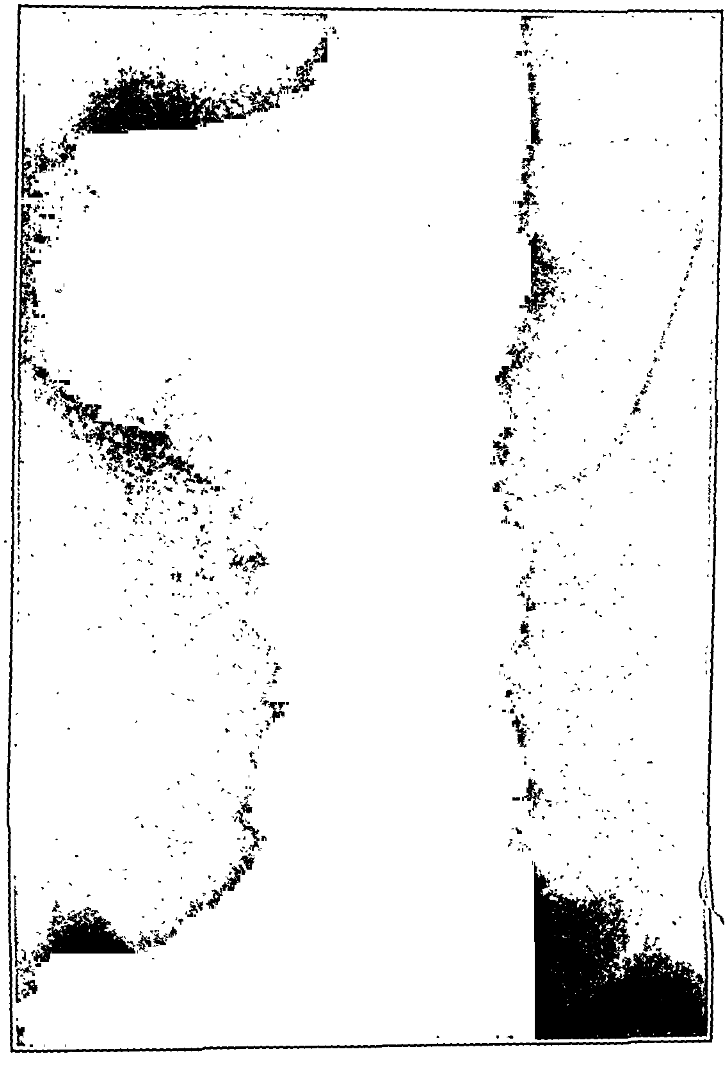


Fig. 4.—Skiagraph showing tube in the duodenum. Tube slightly accentuated by retouching the plate.

4. After the lapse of a few minutes (adaptation time of tube) the tube is allowed to glide down through the half-open mouth without swallowing, simply following the pull of the ball, until a depth of about 60 cm. has been reached.

5. After another five or ten minutes (insertion time of ball in the pars pylorica) the first aspiration is made, which will show that already now the gastric contents have a slightly yellowish tint as a sign of the accomplished insertion. The patient, whose mouth is still half-open, is warned more strongly than before not to make any deglutition movements, in order to give the tube an opportunity of being drawn in still further. After a time the tube will show that 65 or 70 cm. have been inserted.

6. Another aspiration is made and in nearly every case there will be a uniformly turgescent fluid of egg-yellow tint, which is no longer interspersed with casein flakes of the milk and gives an acid or weakly acid reaction.

7. After waiting a little longer and with occasional aspirations it will be possible in normal cases to obtain the characteristically yellow aqueous contents of the duodenum, which sometimes display a greenish-yellow fluorescence and are of neutral or alkaline reaction.

8. Now that there is a certainty of the pyloric ring having been passed, the patient may be allowed to sit up, there being no further danger of the ball falling back against the wall of the stomach.

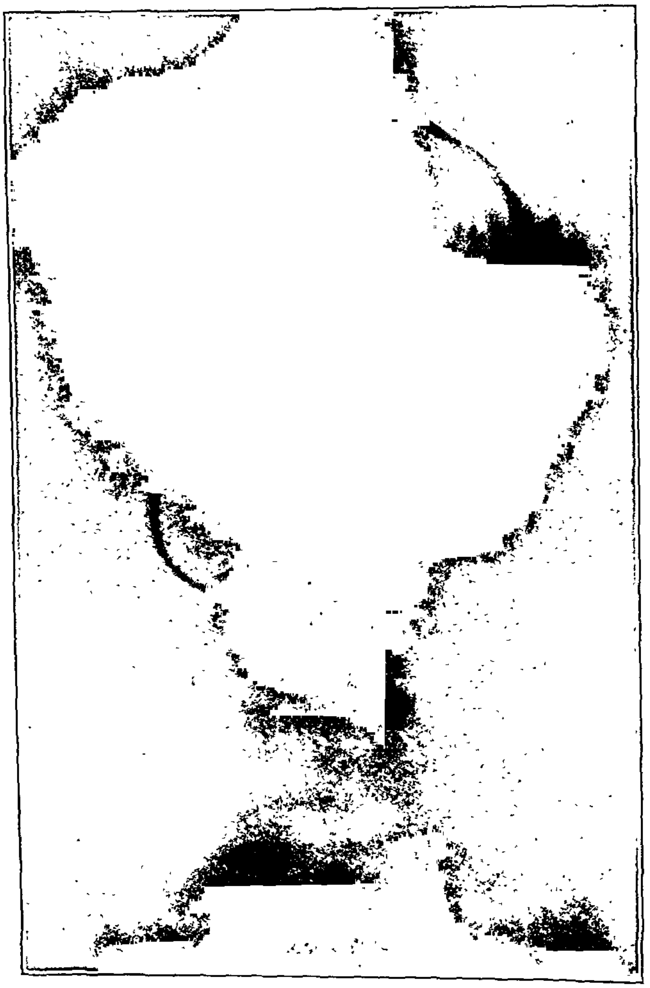


Fig. 5.—Skiagraph showing tube in the duodenum; bismuth used, showing outline of stomach. Tube accentuated by retouching.

On withdrawing the tube, a resistance may be felt at the pyloric ring (in the case of my achylic patient I did not find one) which can be overcome without difficulty. A constriction at the esophagus will be overcome by a few movements of deglutition.

The causes which may make it difficult or impossible to introduce the tube are very various, and sometimes cannot be ascertained. Practice and patience, however, will do much to ensure a favorable result in time. Whenever there is a delay or impediment in the insertion of the tube, the first thought should be of the "repulsion mechanism" of the pylorus, the "door-guard", the function of the pars pylorica being to throw back the chyme against the gastric wall and by mechanically breaking it up, render it more assimilable to the gastric juice, and thus representing a kind of sorting apparatus. Hand in hand with this process goes the closing and subsequent opening of the pylorus, and to this repulsion mechanism our little ball is also subjected—a fact which explains the occasional difficulty of inserting it rapidly.

In consideration of these facts it appears necessary (1) to introduce the tube at the climax of digestion, or half an hour after the test meal, at a time when the opening of the pylorus takes place oftener and more extensively; (2) to keep the tube "short" at a length of about 60 cm., until the ball has been definitely located at the pyloric ring. As to this point I refer to Paragraph 4 of the "Technic of Insertion". Besides, there may be stenoses and tumors of the pylorus which make it impassable, or there may be long-continued spasms of the pylorus after hypersecretions, a condition which may be relieved by alkalies or previous lavage of the stomach. In one of my patients the ball could not even get through the cardia and an operation disclosed carcinoma of the head of the pancreas, of the lesser curvature, probably also involving the cardia. In another patient I found it impossible, after repeated attempts, to introduce the tube into the duodenum, and operation divulged carcinoma of the pylorus.

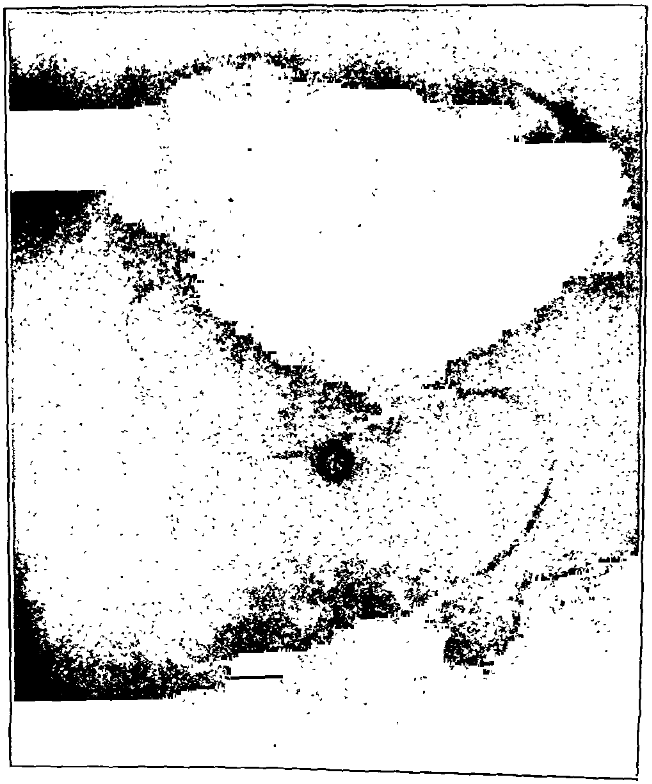


Fig. 6.—Skiagraph showing duodenal tube within the intestine low down. Tube accentuated by retouching.

Reaction of Fluids Obtained.—Sometimes the fluids lose only slowly, or not at all, their acid reaction, although otherwise the aspirated fluid proves both microscopically and chemically that it originates from the duodenum. The causes may vary considerably. In hypersecretions, for instance, it might be assumed that the neutralization takes place only lower down in the intestine. In these cases the possibility suggests itself that the pyloric ring has never been passed and that the aspirated fluid had been regurgitated from the duodenum into the stomach. This, however, can be decided by repeating the aspiration, [illegible] while the ball is supposedly in the duoden[illegible] withdrawal of the tube to 50 cm. This should be done after a cup of black coffee has been ingested, on which the difference in color of the two fluids taken successively will dispel any doubt. In the case of my achylic patient no difference in reaction could be obtained, and since there was also regurgitation, I administered a weak solution of tartaric acid and was then able to demonstrate beautifully the reverse process of an alkaline reaction turning into acid.

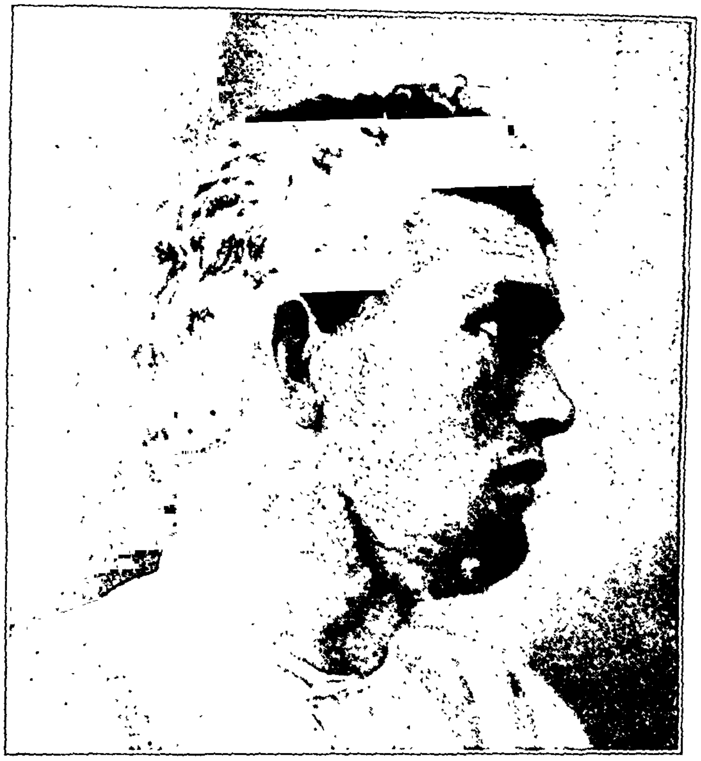
Without indulging in enthusiasm it may be said to-day that the duodenal tube has come to stay. It will require further patient work to perfect the method and when this has been satisfactorily accomplished, we shall be able to derive the full benefit from it.

315 Second Avenue.

ACTINOMYCOSIS OF SKIN

E. GARD EDWARDS, M.D.
LA JUNTA, COLO.

This case is reported on account of the rarity of the disease and the especial rarity of primary infections of the skin from the ray fungus.



Lesions in actinomycosis of the skin.

History.—The patient was a cowboy, aged 26. The lesion had started as a hard nodule near the angle of the jaw, which rapidly increased in size to that of a filbert and which at the same time showed in the skin covering it the peculiar dark red color of actinomycosis. Several other nodules formed and all, at the time the patient consulted me, were in a stage of softening and discharging a purulent matter. The disease had been in progress some weeks and had been variously diagnosed and treated but without success as to a cure or even amelioration.

Diagnosis.—The patient denied syphilitic taint, nor did he show it. Tuberculous conditions were eliminated. One of the nodules was incised and a microscopic examination made of the discharge. The ray fungus was found without difficulty.

Treatment.—Under chloroform anesthesia, every accessible nodule and sinus was opened, curetted and wiped with pure phenol, followed, after the characteristic whitening of the tissues, with 95 per cent. alcohol. The dressings were ordered kept moist with 50 per cent. alcohol, and every other day, so long as the incised parts were open, full strength iodin was applied. No internal medication was given.

Result.—The tissues healed readily inside of three weeks. No return of the disease had occurred the last time the patient was seen, two years later.

A CASE OF FILARIAL HEMATOCHYLURIA

TREATED AFTER THE METHOD OF WHERRY AND MCDILL WITH APPARENT RECOVERY *

CREIGHTON WELLMAN, B.A., M.D.
AND
EDWARD VON ADELUNG, B.S., M.D.
OAKLAND, CAL.

Numerous remedies have been tried in the treatment of filarial hematochyluria, and there is considerable literature on the subject. Lawrie,[1] in 1891, seemed to get good results from the administration of thymol, and Flint,[2] in 1895, thought he had a cure in methylene blue, but subsequent writers have failed to confirm their results. In 1905 Wherry and McDill[3] reported a case treated by thorough cinchonization and subsequent exposure to the *x*-rays.[4] We quote from their report as follows:

> She (the patient) was given 80 to 90 grains of quinin sulphate during forty-eight hours, followed by *x*-ray exposures of five minutes, with the tube 18 inches away. Quinin having been administered daily, these exposures (over the lumbar region) were performed at 2 to 3 p. m. on September 8, 10, 11, 12, 14, 16, 17, 18, and again after cinchonizing as before at 9 p. m. on September 29 and 30. On October 2 the skin over the chest and abdomen became reddened and hot. A chill and left pleurisy developed. Paracentesis produced about 600 c.c. straw-colored fluid on October 8. Skin scarlet all over body. All this time the urine remained thick and bloody, but on October 10 became normal and has remained so. The temperature throughout, except during the attack of pleurisy, remained about normal, 97 to 99.4 in the morning and 98 to 99.4 in the evening. Until the pleuritic attack the patient had gained 25 per cent. in weight and general appearance, and although an evening temperature of 1 to 3 F. persisted until October 22, she regained her strength so rapidly that on October 29 and 30 the *x*-ray was again applied for fifteen minutes, after quinin, with the bulb five inches away. Although the patient has been at home and walking about for the last two months her chyluria has not returned. The living embryos still persist in her blood.

About four years later the authors report again as follows on the case:

> The hematochyluria cleared up on Oct. 10, 1904. Two months later filarial embryos were still present in the peripheral blood, but repeated examinations since, made about once a year, have failed to reveal the embryos. The last examination was made one year ago, 1908. The patient is now in Nagasaki and said to be in good health.

The writers of the present paper wish to record a similar case treated with quinin and *x*-rays, resulting in apparent recovery. While it is too soon to say more than we have indicated in the title to this report, yet the recovery is up to the present date (Jan. 24, 1910) complete and so far may be regarded as a confirmation of Wherry and McDill's observation. The history of our case is as follows:[5]

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* Published under the imprimatur of the American Society of Tropical Medicine.

* From the Laboratory of Tropical Medicine, Oakland College of Medicine, Oakland, Cal.

[1] Lawrence: Lancet, London, Feb. 14, 1891, p. 364.

[2] Flint: New York Med. Jour., June 15, 1895, p. 737.

[3] Wherry and McDill: Jour. Infect. Dis., June 24, 1905, p. 412.

[4] In a footnote the authors add: "Unfortunately we are unable to state the exact hardness of the *x*-ray bulbs. In order to obtain a clear radiograph of the bones of the pelvis with this apparatus (the one used) an exposure of fifteen minutes with the bulb at a distance of five inches from the skin is necessary. Filarial embryos in a thin layer of blood, collected after cinchonizing, exposed to the rays for five minutes with the bulb 16 inches away are not killed but they squirm about in a very excited manner.".

Patient.—H. U., aged 26, single, Japanese, came to San Francisco six years ago from Japan, stopping at Hawaii three months on the way. He has been a resident of Oakland for three years; went to Alaska four years ago and on his return to California had hematochyluria for two months in August and September. In 1908 he had another attack which began in August and lasted up to the date when first seen by us (Dec. 14, 1909). He was not very strong but had no pain to speak of except a slight pain below right scapula on rising.

Examination.—The patient was a fairly well-nourished Japanese with no symptoms except the character of the urine and weakness. Pulse 100, temperature 98. An examination of his blood at midnight showed considerable numbers of a sheathed filarial embryo. The urine was almost as turbid as milk and had a decided bloody tinge. It was examined on December 12, with the following results: Specific gravity 1,028, reaction slightly acid, albumin about 0.3, no sugar, no fat. A differential leucocyte count on the same date revealed the following findings:

Polymorphonuclear neutrophiles	46 per cent
Lymphocytes	29 per cent
Large hyaline mononuclears	14 per cent
Eosinophils	11 per cent

Transitionals counted with polymorphonuclears.

Treatment.—The patient was put on the treatment suggested by Wherry and McDill. We give the details of the treatment, as these are important in a purely empirical question like the present in which we have no idea of the principles involved.

The quinin was given as follows: December 27, 6 a. m., one capsule,[6] 10:30 a. m. two capsules.

December 28, 2 a. m., 2 capsules; 6 a. m., 2 capsules; 9:30 a. m., 2 capsules; 1 p. m., 2 capsules; 4:30 p. m., 2 capsules; 8 p. m., 2 capsules.

December 29, 1:15 a. m., 2 capsules; 7 a. m., 2 capsules, 10:25 a. m., 2 capsules; 1:30 p. m., 2 capsules; 4:45 p. m., 2 capsules; 8 p. m., 2 capsules; 11:20 p. m., 2 capsules.

December 30, 2:30 a. m., 2 capsules; 5:45 a. m., 2 capsules; 9 a. m., 2 capsules; 12:30 p. m., 2 capsules; 3:35 p. m., 2 capsules; 7 p. m., 2 capsules; 10:15 p. m., 2 capsules.

December 31, 1:45 a. m., 2 capsules; 5:15 a. m., 2 capsules; 9 a. m., 2 capsules; 1 p. m., 2 capsules; 6 p. m., 2 capsules; 11 p. m., 2 capsules.

Jan. 1, 1910, 4 a. m., 2 capsules; 8 a. m., 2 capsules; 12 p. m., 2 capsules; 5 p. m., 2 capsules; 9 p. m., 2 capsules.

January 2, 1:30 a. m., 2 capsules; 5:30 a. m., 2 capsules; 9:30 a. m., 2 capsules; 1 p. m., 2 capsules; 6:30 p. m., 2 capsules; 10 p. m., 2 capsules.

January 3, 1:30 a. m., 2 capsules; 11 a. m., 2 capsules; 2:30 p. m., 2 capsules.

January 4, 9 a. m., 2 capsules; 12:45, 2 capsules; 4:30 p. m., 2 capsules; 8 p. m., 2 capsules; 11 p. m., 2 capsules.

January 5, 7 a. m., 2 capsules; 10:30 a. m., 2 capsules; 2 p. m., 2 capsules; 5:30 p. m., 2 capsules; 9 p. m., 2 capsules.

January 6, 1 a. m., 2 capsules; 6 a. m., 11:30 a. m., 2 capsules; 3:30 p. m., 2 capsules; 7 p. m., 2 capsules.

January 7, 2 capsules; 7 a. m., 2 capsules; 11 a. m., 2 capsules.

From this on to Jan. 12, 1910, the patient took three capsules per day.

The patient complained considerably of the symptoms of cinchonism at first and was with some difficulty persuaded to continue the quinin.

The *x*-ray exposures were given as follows:[7] December 14, one and a quarter minute exposure.

December 22, one minute exposure.

December 31, one minute.

January 7, forty-five seconds.

January 12, thirty seconds.

The report of the patient was as follows: December 28, 29, 30, he suffered considerably from the quinin and was very weak.

December 31, patient felt weak but improved.

January 3, he felt stronger.

January 7, he felt stronger than he had felt for a long time; was losing in weight; weighed 126 pounds, the last time he had been weighed previously; now weighed 115½ pounds, in the same clothing.

January 11, he felt better; had gained slightly in weight.

January 12, he felt and looked much better.

The report on the urine now follows: December 8, reddish milky, reaction acid; albumin present by heat and acid tests, no sugar.

December 12, as above.

December 22, urine the same. On standing several days it appeared as shown in Figure 1.

December 27, urine was much clearer; no white upper layer, lower layer much less, a markedly improved urine. Red and white corpuscles present, also epithelium, no casts.

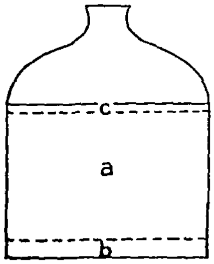

Fig. 1.—Gross appearance of solids in urine after standing (before treatment); a, amber color; b, blood, etc.; c, "cream."

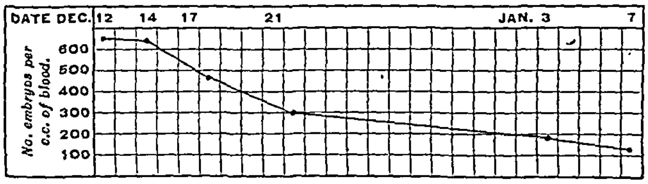

Fig. 2.—Chart showing the comparative numbers of microfilariæ in the peripheral blood at different times during the treatment.

December 31, urine was clear amber; no albumin by heat or acid test. It had been clear nearly four days.

January 3, urine was perfectly clear, pale amber, had been clear for a week. It had never been clear before since the patient's illness began in 1908.

January 7, urine was still clear; color pale amber; no albumin by heat or acid test.

January 12, urine had slight trace of albumin, reaction acid (Fig. 2).

January 14, urine was perfectly clear; no albumin.

The blood findings were also of interest. The number of microfilariæ in the peripheral circulation was not large even when the patient was first seen. The chart (Fig. 2) shows the comparative number of embryos found in equal sized drops of blood on the dates mentioned. The blood was always taken at night as with one exception (when a single embryo was found after a long search) the filariæ were absent from the blood taken in the day time.

The differential leucocyte count of Dec. 12, 1909, has already been given. On Jan. 7, 1910, the blood gave the following count:

Polymorphonuclear neutrophils	40 per cent
Lymphocytes	39 per cent
Large hyaline mononuclears	13 per cent
Eosinophils	8 per cent

Transitionals counted with polymorphonuclears.

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[5] Wherry and McDill: Jour. Trop. Med. and Hyg., Aug. 16, 1909, p. 241.

[6] Each capsule contained five grains of quinin sulphate.

[7] Twelve-inch coil; direct current; Wehnelt interrupter; 6¾-inch bulbs (Friedlander and Gundlach); distance from target to *table-top*, 15 inches; 3-inch vacuum which sometimes ran up to 6 or 7 inches during treatment.

On January 12 the embryos still persisted in the blood (taken at 2:30 a. m.) but in very small numbers, only one being found in 2 slides. No attempt was made to estimate their number per cubic centimeter. It should be said that the embryos were never found in the centrifugalized urine.

At the present writing (Jan. 24, 1910) the patient is very happy and encouraged and looks like a different man.[8]

In conclusion some of the interesting points connected with this case are as follows:

1. The apparent confirmation of the value of this method of treating filarial hematochyluria.
2. The absence of embryos from the urine even when the case was first seen.
3. The rapid decrease but persistence of a certain number of the microfilariæ in the peripheral night blood during the treatment.

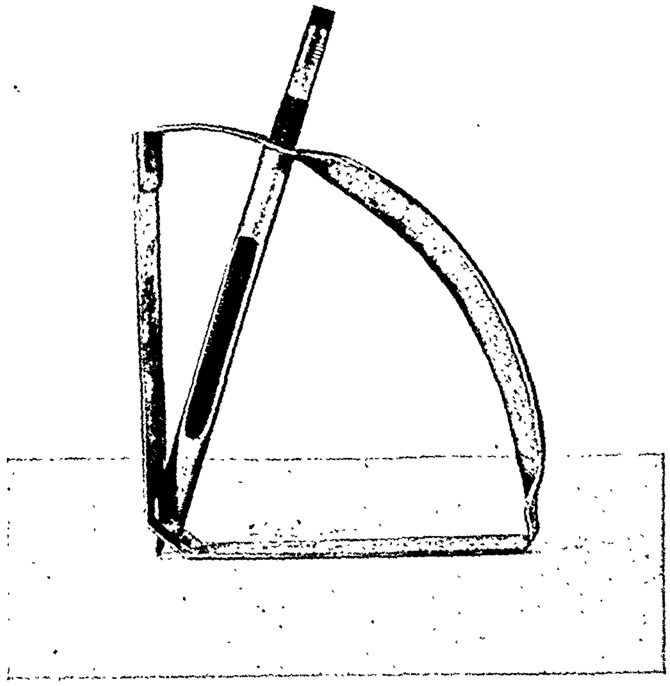
Only time can settle the question as to the permanence of the cure, and we hope that other observers will test our results. We have tried in vain to find another case before publishing these notes, but, failing this, have thought that the suggestions arising from our experience warranted our laying the account of the experiment before other workers.

1068 Broadway.

A PENCIL-HOLDER FOR TRACING OUTLINES OF LIMBS

JOHN RIDLON, M.D.
CHICAGO

It is often desirable to take the tracing of the outline of a patient's limbs for purposes of record, or for the use of the brace-maker. To carry the pencil in the hand in an absolutely vertical position, or with a uniform inclination, is impossible; the result of the attempt is an inaccurate and unsatisfactory outline. The device shown in the illustration makes it possible to obtain an accurate tracing, as the pencil-point is always in the vertical plane of the contour of the limb.



A pencil-holder for tracing outlines of limbs.

72 Madison Street.

AN ANOMALY IN SENSIBILITY DURING AN ACUTE SEROUS MENINGITIS

TOM A. WILLIAMS, M.B., C.M. (EDIN.)
WASHINGTON, D. C.

History.—The patient, a farmer, aged 61, was thrown from a trap when intoxicated, and during the next ten days gradually became delirious and quadriplegic, with rectal and vesical incontinence. He had been a hard drinker, and for two years had suffered from numb feelings and coldness of hands and feet without pain or loss of power.

Examination.—Ten days after the accident, when the patient was admitted to the Emergency Hospital, there was complete paralysis below the second thoracic segment and also of the right triceps innervation. Other arm movements were conserved although much impaired, especially distally. Facial and neck movements were strong. All reflexes were then absent with the exception of a slight dorsiflexion of the left great toe. In his delirious state the sensibility could be examined only incompletely, but it was clear that the right side was quite insensitive to pain and temperature as high as the second intercostal space, although no abnormality was then detected on the left side. Bedsores began to appear.

Disturbed Sensibility.—Five days later, after the deep reflexes had returned and the great toe had ceased to extend, there was detected the curious anomaly of dissociated sensation which I desire to record. On the left side as high as the second thoracic vertebra a sensation of coolness was immediately reported when the man was touched with an object at a temperature of 60 F., but when he was touched with a tube containing ice no sensation of cold was felt, the patient immediately calling out with pain, crying "it sticks." He could appreciate the painfulness as well as the temperature of a tube of boiling water, but felt no pain, although he distinguished the warmth, of a tube a little over blood-heat. There was marked hyperesthesia to pin prick and to deep pressure over this area. Light touches could be felt on both sides, although less easily on the right, especially distally. The sense of attitude was completely lost in both lower limbs, and appeared to be impaired in the upper limbs. Without going into further detail, although the case presents other points of interest which are reserved for a future communication with Dr. Carr, I wish to report that the failure to appreciate cold as such still persists on the left side, one month later, but the patient now declares that it burns. The hyperesthesia is less intense and the sensibility has now returned on both sides as low as the sixth thoracic vertebra. As to the etiology, I had believed the lesion a hematomyelia, but no blood was found in the cerebrospinal fluid, though it was reported that lymphocytes were abundant. The Noguchi reaction was negative.

Operation.—Dr. W. W. Carr, hearing of the cases of Murray of Boston and Victor Horsley of London, believed that a serous meningitis might be present, and resolved to operate eight days after the man's admission to the hospital. He selected the fifth cervical vertebra as the site of operation on account of a slight asymmetry there, although the *x*-ray revealed nothing. No abnormality of cord or meninges was found, but about 6 ounces of serous fluid welled out when the bulging dura was incised.

The disordered sensibility was of a syringomyelic type as regards the right-sided loss to impressions of pain and change of temperature. But on the left side the pain and temperature impulses passed with increased facility and the patient's sensibility was only below the normal as to perception of extreme cold.

So far as this goes it conforms to what Head has described as a loss of protopathic sensibility; but in its completeness this comprises also loss of perception of high temperature and superficial pain as well. Moreover, its impairment is always due to peripheral nerve lesion, and never to interruption of afferent impulses within the central nervous system, where they are grouped into tracts, respectively, conveying (1) all forms of touch, (2) sense of attitudes, (a) conscious and (b) unconscious, (3) all forms of pain, (4) in close proximity to the last and contiguous or intermingled, all perception of change of temperature.

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[8] An embryo was found after some search in his blood on the night of Jan. 24, 1910, so the microfilariæ still persist in reduced numbers. The urine is still perfectly normal. We hope to report on the case again at some future time.

This patient's anomaly does not conform to either the peripheral or spinal type; hence it is worthy of record, in order that other observations may furnish comparative data for the solution of what is at present a problem.

1758 K Street.

A RELIABLE TENDON SUTURE

EDWARD RISCHAR, M.D.

Assistant in the Laboratory of Operative Surgery and Surgical Anatomy of the Chicago Policlinic

CHICAGO

A reliable tendon coaptation by suture is assured by the following technic:

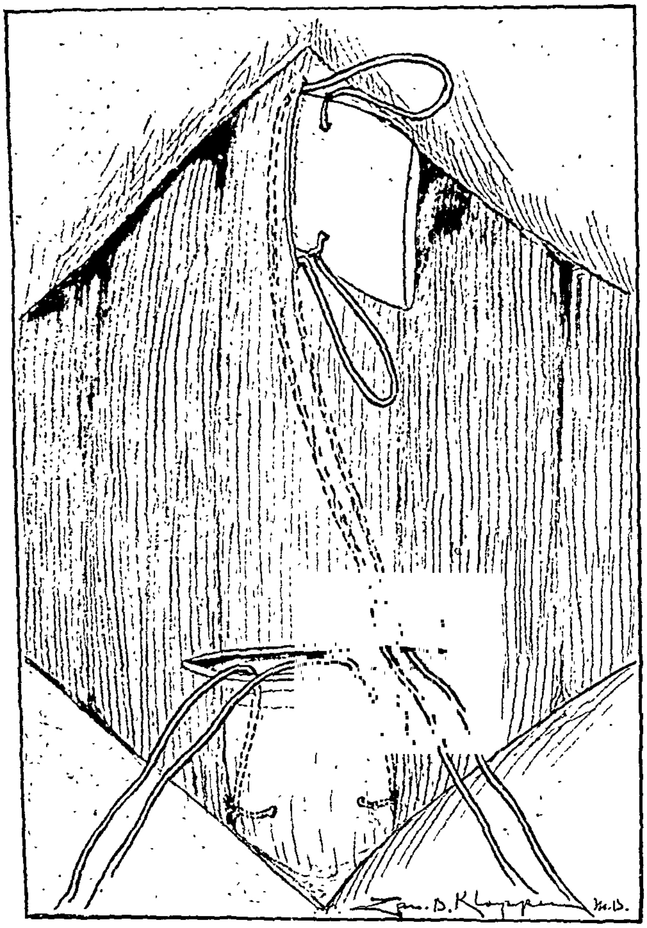


Fig. 1.—Showing side sutures inserted, to be used as tractors.

From within the tendon sheath bring a severed end of the tendon into the wound, with the least possible injury to the tendon. This is done by grasping its side with a small toothed forceps by which it is held until one of the side sutures is applied, which will then be used as a tractor until the opposite side suture is placed. These side sutures are placed about one-quarter of an inch from the stump, and grasp enough tissue to assure a secure hold for the intertendon sutures. They are firmly tied and left long, as shown in Figure 1.

Should one of the ends be so retracted as to be out of reach, which is often the case with the proximal end, place a probe in the sheath up to the tendon's stump. Cut the skin over the sheath to where the stump is found; then make an opening into it, bring out the stump, and apply the side sutures as shown in Figure 1.

Having the side sutures in both stumps, use their long ends to pull and hold the stumps in position until the intertendon sutures are placed. These intertendon sutures are placed behind the side sutures, and their knots to one end as shown in Figure 2.

The sheath is closed with fine catgut. The limb is put up in a relaxed position with perfect rest, which means wood, or, better, plaster splinting, for two weeks or longer, followed by gradually increased motion. It should be remembered that the result in tendon surgery is best without drainage; therefore, the field must be well prepared.

The advantages of the suture are:

1. It holds the tendon with absolute security and in position.

2. The major part of the tendon is unsutured, permitting early union.

3. The knots are placed where they cannot interfere with a good closure nor invite infection.

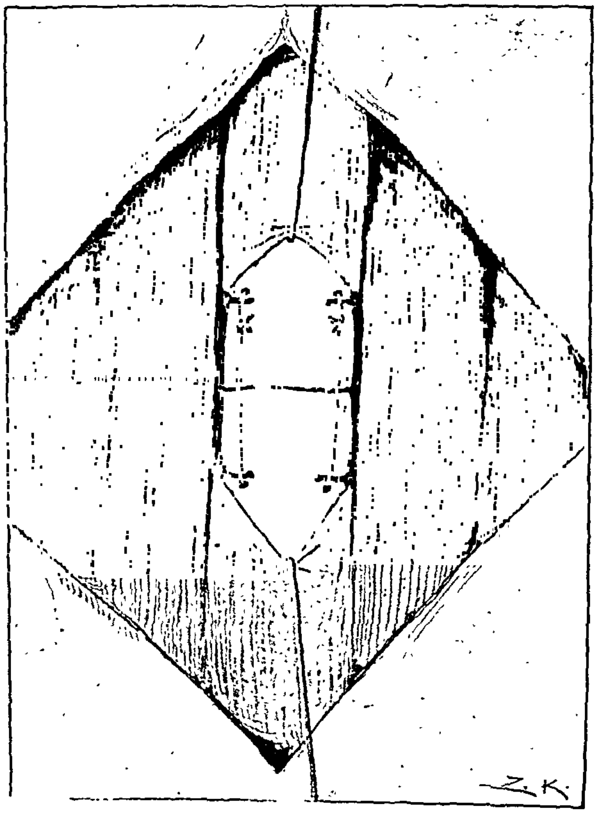


Fig. 2.—Showing intertendon sutures inserted behind side sutures and tied with knots distant from severed ends of tendon.

4. The method is precise, and for that reason can be carried out very quickly.

1316 Sedgwick Street.

Success of Mission Hospitals in India.—Dr. Frank Van Allen, an American missionary in Madura, India, writes that Hindus have contributed over $5,000 to the Albert Victor Hospital in that city, although it is a distinctively Christian institution. A few years ago such an occurrence would not have been dreamed of by missionary or Hindu, and it is a notable tribute to the character of the work done, which appeals to all regardless of religious preference.

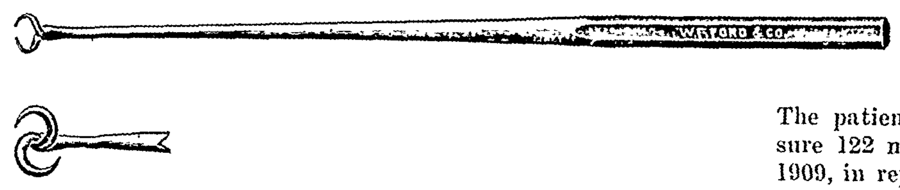
A NEW SPIRAL TONSIL TENACULUM

WILLIAM WESLEY CARTER, A.M., M.D.
NEW YORK

Heretofore there has been no instrument on the market that will securely hold a soft, friable tonsil while it is being liberated from its pillars and while the snare or tonsillotome is being adjusted and used. The instrument here illustrated consists of two spirally curved prongs, flattened on the upper surface, each making the half turn of a screw; these are mounted on a long slender shaft having an octagonal handle.

Some of the chief points in favor of the instrument are the following:

1. It is simple, occupies little space, can be instantly engaged or disengaged by a half turn in either direction, and admits of either the snare or tonsillotome being used with the greatest facility after the tenaculum has been placed in position.
2. The traction area of the instrument, which may be described as that portion of tissue that lies vertically above the engaging parts of the instrument after it is placed in position, is the greatest possible within the small space occupied by the instrument, and since it engages the more resistant portion of the tonsil, the grip that it maintains is very strong.
3. The twisting action of the instrument tends to center the tonsillar tissue, thus pulling it away from the pillars and assisting in liberating it from the latter.



A new spiral tonsil tenaculum.

4. The points of the instrument are imbedded, and therefore sponging of the throat can be done without the disagreeable experience of getting the gauze caught on the instrument.
5. The instrument finds its greatest usefulness in removing soft, mushy tonsils and in submerged cases.

69 West Fiftieth Street.

PAROXYSMAL HEMOGLOBINURIA

A CASE PRESENTING CERTAIN INTERESTING CLINICAL FEATURES, WITH APPARENT CURE BY THE ADMINISTRATION OF CALCIUM LACTATE

HARRY W. GOODALL, M.D.
BOSTON

History.—The patient, a woman of French extraction, aged 30, had lived in New England for the past ten years. She had been always well and strong up to the time of the present illness. There was no history of syphilis or malaria. In the fall of 1905 after exposure to cold she was seized with a severe chill which lasted one hour. Similar chills occurred two or three times a week during the remainder of the winter, always after exposure to the cold. The following summer she was perfectly well. With the onset of cold weather in the fall of 1906 the chills recurred and were more frequent and more severe. During the summer of 1907 she had no chills but did not feel well, and complained of weakness and of being tired all the time. In the fall of 1907 the chills again returned. Exposure to the cold air was always followed by a chill. During this entire period the patient had paid no particular attention to the urine but at no time had she noticed anything abnormal.

Examination.—She was first seen Dec. 3, 1907, immediately after a chill. Examination of the urine voided soon afterward showed the well known characteristics of hemoglobinuria. Aside from a general brownish pigmentation of the skin, most pronounced about the neck and inner surface of the extremities, the physical examination was negative. This pigmentation had been first noticed one and a half years previously. Blood examination showed hemoglobin 70 per cent., whites 6,000, reds 3,600,000. A stained specimen showed moderate achromia, otherwise was negative. Systolic blood-pressure was 110 mm. Hg, diastolic 60 mm. Hg. The patient's weight was 120 pounds. She was under hospital observation from December 8 to December 20 inclusive. Typical chills were induced December 8, 9, 11, 12, 13 and 16 by allowing the patient to walk for half an hour in the cold air. Hemolysis was demonstrated after each chill, the blood serum giving the absorption bands of oxyhemoglobin. Hemoglobinuria, however, occurred only on the 11th and 16th. On the 11th four ounces of urine were voided one-half hour after the chill, which gave the absorption bands of oxyhemoglobin. Each subsequent specimen voided during the day was examined but hemoglobin could not be demonstrated. On the 16th three ounces of urine voided a half hour after the chill gave the absorption bands of oxyhemoglobin; one hour later three ounces were voided in which hemoglobin could not be demonstrated; two hours later four ounces of bright red urine were voided which gave the absorption bands of methemoglobin. Each subsequent specimen voided during the day was examined but contained no hemoglobin.

Treatment and Course of Disease.—The administration of four grains of calcium lactate four times a day by mouth was begun December 17. The following three mornings the patient was exposed to the cold air as previously but had no chills and the blood showed no hemolysis. On December 20 she was given Fowler's solution in increasing doses. On December 25 she had gained 5¼ pounds and felt perfectly well. On Feb. 4, 1908, she reported that she had had a severe attack of grip. From December 27 to January 1 there was no recurrence of the chills. The patient's weight was 127½ pounds; systolic blood-pressure 122 mm. Hg, hemoglobin 95 reds, 5,200,000. On May 6, 1909, in reply to a letter the patient stated that she had had no recurrence of the chills and had been perfectly well. Since this date it has been impossible to learn where the patient is.

Vincent† and Deaderick‡ report favorable results from the use of calcium lactate in cases of hemoglobinuria.

213 Beacon Street.

SARCOMA OF THE PROSTATE *

C. L. GIBSON, M.D.
Surgeon St. Luke's Hospital; Consulting Genito-Urinary Surgeon t the City Hospital
NEW YORK

This disease is fortunately rare, as so far it has defie all the resources of the surgical art to relieve it. It i not quite so rare, however, as a perusal of the literatur would seem to show, because the various statistical obse vations of accepted value have wisely refused to admi cases not backed up by a definite microscopic examination. As the great majority of these cases are unamenable to surgical treatment, and autopsies, particularly i this country, are difficult to obtain, suitable material fo microscopic examination will only exceptionally be available.

When I reported my first case to this Association i 1904,[1] I could find only one extensive tabulation o authentic cases, 24 in all.[2] Powers[3] would accept onl 23 cases, including his case and mine.

The latest observation by Proust[4] tabulates 34 authentic cases and 14 probable. This list is obviously incomplete and does not contain Powers' case nor mine of 1904.

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† Vincent: Compt. rend. Soc. de biol., Dec. 16, 1905, p. 633.
‡ Deaderick: Jour. Trop. Med. and Hyg., 1907, x, 393.
* Read before the American Association of Genito-Urinary Surgeons, May 31, 1909.
[1] Paper was not published.
[2] Socin: Deutsch. Chir., 1902.
[3] Tr. Am. Surg. Assn., 1907.
[4] Ann. d. mal. d. Org. génito-urin., May 15, 1907.

It is not necessary to demonstrate by more extensive references to the literature that the disease is uncommon. We should be on the alert to discover its existence at an early stage, using, if necessary, extraordinary expedients, such as exploratory incision, in order to remove the disease radically at a period when it is confined to the prostate. As most of the cases occur in young individuals, any unusual size of the prostate or otherwise unexplainable obstructive symptoms should bring the possibility of this tumor to our minds.

CASE 1.—*History.*—My first case was that of a man, aged 35, referred to me by Dr. P. R. Bolton, who had operated on him at the New York Hospital in 1904, removing from the prostate an intravesical projection which had greatly interfered with evacuation of the bladder. The portion removed was reported by the pathological laboratory to be a small round-cell sarcoma of the prostate.

Examination.—The tumor of the prostate grew rapidly and the patient came under my care at St. Luke's four months after the previous operation. Rectal examination showed a diffuse, even, firm mass the size of a small fist occupying the prostatic region.

Operation.—The prostate was removed *en masse* with the neck of the bladder by a combined suprapubic and perineal operation, but the patient succumbed to increasing exhaustion. No autopsy.

CASE 2.—*History.*—G. G., aged 36, married, Italian laborer, was admitted to St. Luke's Hospital, Nov. 10, 1907, referred by Dr. M. J. Echeverria. There is no history of venereal disease.

Present Illness.—About two months before admission the patient began to notice pain in the lower abdomen, somewhat more marked on the right side, pretty constant, with occasional exacerbations. Urination was frequent, particularly at night. The patient had trouble in starting stream, and had to strain to empty bladder. There was also some scalding sensation. The urine was often cloudy, but blood was absent; there was no urethral discharge. The patient was constipated. There was loss of weight and strength.

Examination.—There was abdominal distention below the umbilicus. A mass could be felt extending from the umbilicus well down into the pelvis, which was hard and not freely movable. There was a retained left testicle. Rectal examination showed the axis of the rectum deflected to the right. An irregular mass, the size of the fist, hard and immovable, replaced the prostate. A soft catheter passed easily, withdrawing an ounce of residual urine. There was slight elevation of temperature and pulse. Blood examination showed 9,900 whites; polynuclears 80 per cent. Urine examination varied, but usually showed blood and albumin.

Operation.—November 15 exploratory operation was made to determine whether radical removal might be feasible; but it was found that the mass involved the other pelvic contents to a degree that made removal impossible. A fragment was removed for microscopic examination. Suprapubic drainage was instituted for prophylaxis of developing obstruction.

Postoperative History.—The growth of the tumor was very rapid; but the patient was now free from pain. Coley's fluid was used without appreciable results. The patient died of general exhaustion; the tumor mass then nearly filled the abdomen.

Pathologic Report.—By Dr. F. C. Wood. Macroscopic examination: Specimen consists of several small pieces of tissue removed from tumor of the prostate. Microscopic examination: Sections show a small round-cell sarcoma which is moderately vascular. The cells are regular in outline, not closely packed together, but separated by considerable intercellular stroma. Mitoses are frequent.

NUMBER OF AUTHENTIC CASES

Analyzing the cases tabulated by Powers and Proust, eliminating those in the latter's table which are not accepted by Powers, we have 32, namely:

Rose	2	West	1
Socin	3	Stein	1
Tordens	1	Hughes (Wharton)	1
Kaufmann	4	Burckhardt	1
Birch-Hirschfeld	1	Verhoogen	1
Schaleck-Bayer	1	Marsh	1
Ley	2	Mathias	1
Spanton	1	Botesen	1
Hind	1	Gibson (first case)	1
Van der Hoeven	1	Stern	1
Grattzer	1	Powers	1
Barth	1		
Oleva	1		32
Guyon (Proust)	1		

To these must be added Cabot's second case[5] (J. K., aged 75, operated April 21, 1904; tumor examined by Dr. F. W. Whitney and found to be a small spindle-cell sarcoma) and Gibson's second case.

Bobbeo (Turin) reports a case with autopsy and microscopic examination.[6]

Depage[7] successfully removed a prostate weighing 650 grams from a man of 25. Microscopic examination showed small, round-cell sarcoma.

These are the absolutely authenticated cases, numbering 36.

8 East Fifty-eighth Street.

THE ETIOLOGY OF THE TYPHUS FEVER (TABARDILLO) OF MEXICO CITY

A FURTHER PRELIMINARY REPORT[*]

H. T. RICKETTS, M.D.
AND
RUSSELL M. WILDER
CHICAGO

Some months ago[1] we reported an experiment in which the virus of typhus, as it exists in the diluted serum of the patient, failed to pass through a Berkefeld filter. The monkey which received the unfiltered serum, exhibited a severe course of fever after an incubation period of five days, whereas the animal which received the filtered serum developed no fever and remained perfectly well.

The immunity test, which has not been reported heretofore, confirmed the conclusion that the virus did not pass through the filter. This test, which was given about one month following the "filtration experiment," consisted of the intraperitoneal injection of 7 c.c. of diluted defibrinated blood drawn from a human patient on the tenth or eleventh day of his fever. No. 3, which had tolerated the filtered serum without visible disturbance, showed a course of high fever lasting eleven days, and preceded by an incubation period of seven days, as the result of the immunity test. The animal which had received the unfiltered serum died as a consequence, and of course, no immunity test could be given.

This experiment has been repeated with a similar result. No. 19, which received filtered serum, showed no signs of infection, whereas No. 18, which was given unfiltered serum, passed through the customary incubation period followed by a severe course of fever.

Anderson and Goldberger[2] obtained a similar result.

It seems, therefore, that the evidence is sufficiently strong that the virus of tabardillo does not pass through a filter of the type mentioned. This being the case, the result may be taken as offering a suggestion in regard to the probable or approximate size of the virus. It seems not unlikely, in view of its non-filterability, that the micro-organism is of such size that it should be susceptible to observation microscopically, provided its tinctorial affinities and density are favorable.

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[5] Cabot, A. T.: Papers on Genito-Urinary Surgery, Boston, David Clapp & Son, 1907.

[6] Centralbl. f. Chir., 1909.

[7] Jour. d. chir., Bruxelles, 1908, p. 372.

[*] From the University of Chicago (Department of Pathology) and the Memorial Institute for Infectious Diseases, Chicago.

[1] THE JOURNAL A. M. A., Feb. 5, 1910, p. 463.

[2] Anderson and G[illegible] Pub. Health Rep., Feb. 18, 1910.

Prompted by this probability, we have been engaged in a careful search of the blood of patients for the presence of micro-organisms, correlating our findings with the microbic content of the organs of the body louse, which has the power of carrying the disease. It will be apparent that the results do not prove that the organism to be described is the cause of typhus, but to our minds they have a suggestive value which is sufficient to render their preliminary presentation justifiable. They may be stated briefly as follows:

1. In the stained (Giemsa) preparation of the blood of patients, taken on from the seventh to the twelfth day of the disease, we invariably have found a short bacillus which has roughly the morphology of those which belong to the "hemorrhagic septicemia group." Usually it appears to stain solidly, but on minute examination an unstained or faintly stained bar is seen to extend across the middle. Occasionally two organisms are seen end to end. Exact measurements have not been made, but when compared with the size of the erythrocyte, their length is estimated at hardly more than two micromillimeters, and their diameter at about one-third this figure. Certain other bodies, the identity of which is not so clear, may represent degeneration or involution forms of the above. They consist of two stained granules, connected by an "intermediate substance," which is stained faintly blue or not at all. Frequently one of these granules, or "poles," is larger than the other and stained a deep purple, whereas the smaller takes a faint blue color.

2. In moist preparations of the blood of patients, bacillary bodies, with a structure like that mentioned above, have been encountered in all cases. The differentiation of the forms into two halves, separated by a line or narrow zone of a substance of different refractive power, may be observed. They possess no active motility, but vibrate more or less rapidly.

3. The dejecta and various organs of a large series of lice have been stained in a similar way and examined for the presence of micro-organisms. Certain groups had been deliberately infected by permitting the lice to feed on patients, while others were supposedly normal, having been collected from healthy individuals. Streptocococci, staphylococci, an oval bacillus occurring in clusters, and certain solid staining bacilli are encountered irregularly and indifferently in the feces and intestinal contents of both "normal" and "infected" lice. Polar-staining organisms have been found occasionally in the feces, and intestinal contents of "normal" lice, whereas they are present almost constantly, and often in large numbers, in similar material from "infected" individuals.

Protozoa have not been recognized. Micro-organisms are encountered occasionally in preparation of the salivary glands, ovary, eggs, and testes of the louse. Further study is needed to determine whether they are present in these tissues as a result of faulty technic, or not.

TECHNIC

Probably no field of microscopic research is more exposed to errors and misinterpretation than the search of the blood for micro-organisms of an unknown character. We shall not at this time consider the many sources of confusion which are inherent in the blood itself, and in methods of its preparation. Naturally we have attempted to avoid being led astray by these conditions. Accidental contaminations from outside have been guarded against carefully. Slides and cover-glasses were cleaned in sulphuric acid and potassium bichromate, washed in freshly distilled water and preserved in absolute alcohol. The latter was removed by freshly laundered linen just prior to making the preparations. Forceps previously flamed were used in manipulating the glass. The water employed in diluting the Giemsa stain was distilled, then filtered, autoclaved and preserved in small flasks, which had been cleaned and rinsed repeatedly with filtered water. Preparations of the blood were covered at once to avoid contamination from the air. The blood was taken from the ear after the latter had been scrubbed with green soap and absolute alcohol by means of sterilized cotton.

FREQUENCY OF THE BACILLI IN THE BLOOD

The organisms described have been found to be more numerous in the blood within three or four days prior to crisis than before this period. In comparison with the frequency with which the organism of malaria and trypanosomiasis are encountered in the blood of patients the bacilli would be considered quite rare. It is rare to recognize a bacillus short of one trip across a three-fourths-inch cover-glass, and frequently it is necessary to cover this distance two or three times. This is true of both the stained and the fresh preparations. A rough, and naturally inaccurate, idea of their number may be obtained from the consideration that 0.01 c.c. of blood made from fourteen to twenty-four smears on the three-quarter-inch cover-glass, as determined in two observations. With the 2-millimeter apochromatic objective of Zeiss and with the No. 6 compensating ocular, and with the tube drawn out to 16 millimeters, it is required to traverse the preparation from 80 to 90 times in order to observe the entire surface of one cover-glass. Hence one might expect, roughly, to find from 300 to 2,000 bacilli in 0.01 c.c. of blood.

In the intestinal contents of the "infected" louse, it is occasionally necessary to search for three or four minutes before bipolar organisms are found, but in most instances organisms of this type are much more numerous in the intestine of the "infected" louse, and fifteen or twenty may be found in a single field.

It has occurred to us that the segmented bacilli observed in the blood may be identical with the bipolar forms, which are found in the intestinal contents of the louse. The differences are not greater than those which are encountered in the known organisms of this type, such as the plague bacilli and that found in association with Rocky Mountain spotted fever.

THEORETICAL CONSIDERATIONS

Considering that typhus is an insect-borne disease, the first thought in regard to its microbic etiology would naturally involve an organism of protozoan character, on the basis of analogies which are known to all. Yet our knowledge of the rôle of the flea in the transmission of the bacillus of plague, of the tick in South Africa in carrying the spirillum of tick fever, and of the same insect in carrying the bacilli which are associated with Rocky Mountain spotted fever, should leave us without prejudice regarding the etiology of some other insect-borne disease. It seems, therefore, that our minds should be open to conviction in relation to a bacterial cause for typhus as well as protozoan.

There are, in addition, at least two features of typhus which would suggest a bacterial rather than a protozoan cause.

The first consists of the fact that typhus is an acute self-limited disease, in so far as clinical evidence can show. This condition is more in harmony with a bacterial rather than a protozoan cause, inasmuch as the protozoan diseases, in so far as their etiology has been determined, are chronic in character, provided the animal survives the initial acute attack.

A second condition which suggests bacterial etiology consists of the fact that one attack of typhus, at least in the monkey, confers immunity to further inoculations. It is true that not all bacterial diseases confer such immunity, but it is equally true that immunity is not recognized as a distinctive feature of protozoan infections.

If we may be permitted to resort to another analogy, some ground may be found for the theory that typhus is caused by an organism of the "hemorrhagic septicemia group" of bacteria. This relates to the fact that typhus actually is a hemorrhagic septicemia from the clinical and experimental standpoints, and that it has certain points which are distinctly common to plague and Rocky Mountain spotted fever, both of which may be classed as hemorrhagic septicemias. We are inclined to consider, therefore, that the three diseases mentioned constitute a group of human "hemorrhagic septicemias."

We are aware that others have described organisms more or less similar to the one we have considered in relation to typhus, but in so far as we know they are organisms which are susceptible to cultivation by ordinary means. Gavino and his assistants in Mexico City and Anderson and Goldberger have failed to cultivate an organism of any type from typhus, and this has been our experience also. We consequently conclude that the organism we described is not susceptible to cultivation under ordinary conditions. This is corroborated by the fact that two experiments failed to yield an organism of this type from the intestinal contents of the louse.

It is the purpose of this paper to present the observations and the theoretical considerations which have been mentioned solely because of their suggestive value. It is clear in our minds that the grounds are not sufficient for claiming an etiologic rôle on the part of the organism described, yet the conditions under which they are found, together with the theoretical argument presented above, appear to demand that they be taken somewhat seriously and subjected to further study in their relationship to typhus.

We desire to express our obligations to the Department of Public Instruction of Mexico; to Director Gaviño of the Bacteriologic Institute; to the authorities of the General Hospital; and particularly to Dr. Escalona, for their numerous courtesies.

The Professional Anesthetist.—To the patient the professional anesthetist is of inestimable value for he relieves the surgeon totally of the worries of the anesthetic and permits him to give all his attention to the operation. To the surgeon he gives a feeling of confidence which knows no value. Due to his experience and skill, the professional anesthetist can usually learn the anesthetic characteristics of the patient. He knows when it is advisable or necessary to administer hypodermics of strychnin, morphin, scopolamin or atropin. He knows what preliminary anesthetic it is best to administer and what general one should follow, how to avoid the dangers when it becomes necessary to change from one anesthetic to another.—E. Metzenbaum, in *Ohio State Medical Journal.*

LOCAL ANESTHESIA WITH QUININ AND UREA HYDROCHLORID

HENRY THIBAULT, M.D.
SCOTT, ARK.

The following report of an experience with the bimuriate of quinin and urea hydrochlorid may prove of some value to surgeons doing abdominal work, especially in cases in which general anesthesia is undesirable.

History.—Strangulation of an old inguinal hernia occurred, March 10, in a negress, aged 64, who had, in addition, inoperable cancer of the uterus and rectum. The circulation was poor. There were arrhythmia, edema, considerable arterial sclerosis, beginning dilatation of the heart; slight cough, some pulmonary secretion and a parenchymatous nephritis.

Operation.—Immediate operation was necessary and both physicians called in consultation thought that general anesthesia would almost certainly prove fatal. The operation was done under local anesthesia, induced by injecting a 0.25 per cent. solution of quinin and urea hydrochlorid. The tissues above the canal were moderately infiltrated with the solution, and there was no pain until after the canal was laid open, when the peritoneum was found to be quite sensitive. About 2 drams of the warmed solution was poured into the canal and in a few minutes there was perfect anesthesia of the parietal peritoneum and the operation was finished without the patient at any subsequent time feeling any pain, although considerable adhesions were broken up. There was no local reaction in the peritoneum, union was primary and there was no shock. The fluid poured into the canal gradually escaped into the abdomen as the adhesions were broken up. There was no pain after the operation and nothing to indicate that any peritoneal irritation had taken place.

While it is dangerous to draw conclusions from a single case, this report is at least worth attention and suggests that the solution might be poured into the abdomen and more extensive operations done without pain or injury to the patient, as the presence of the solution seems to render the handling of the abdominal viscera painless.

Therapeutics

HYPERTENSION

Increased arterial tension is probably always the incipient stage of arteriosclerosis and a more or less prolonged condition before the ever-increasing cardiovascular-renal disease is actually in evidence. Deaths from one end of this tripod, viz.: cardiac, arterial, or kidney lesions, are on the increase in civilized countries, and especially in America. Increased arterial tension, at first intermittent, then more or less persistent, is a forerunner of the disease that is really one that should be only that of old age. The age of apoplexy is growing younger. Valvular disease of the heart without previous history of tangible cause, such as inflammatory rheumatism, chorea, diphtheria, or other infection, is markedly on the increase, and chronic nephritis is climbing up the scale of frequency of the causes of death, especially in cities.

The recognized causes of early hypertension, and later arteriosclerosis, are severe infections, septic processes, typhoid fever, syphilis and the necessary prolonged use of mercury, and chronic lead poisoning, which is now rare. Causes that are not generally recognized are nervous hypertension, which is due to the excessive rapidity of our lives (most especially of men, but also of women); and chronic nicotin poisoning, which is occurring more and more frequently because, although a larger percentage of any gathering of men than ever before do not smoke at all, of the men who do smoke more smoke excessively, at least excessively for their ability to withstand the drug. In other words, nicotin plus high nervous tension causes more harm than nicotin did years ago without the nervous tension. Another often not recognized cause of hypertension is gout with its probable manifold causes and manifold signs, often so intangible as to be elusive. The varying causes of gout and the causes of hypertension without gout are so closely associated as often to baffle separation.

Imperfect thyroid secretion and increased suprarenal secretion would both tend to hypertension, but the strongest element of all is the strenuosity of life in the present era. A decreasing cause of hypertension is the overuse of alcohol, while an increasing cause is athletic competition among growing boys and young men.

The symptoms of hypertension are headaches or at least fulness of the head, slight, infrequent dizziness, a tendency to flushing, or at times a slight hyperemia of the skin, especially after the part has been irritated, irritability of temper, sometimes sleeplessness, and increased frequency of urination. Perhaps these are the only symptoms unless there are some due to the cause of the condition, viz.: if the cause is nicotin, there will be the symptoms of overuse of nicotin, etc. The pulse tension will be noted too high by the finger, but is demonstrably found too high by the sphygmomanometer. This is the stage when cardiovascular-renal disease may be postponed or perhaps actually prevented.

The next stage, and this only after months and perhaps even several years of the continued hypertension, will give symptoms referable to the heart, to the arteries, or to the kidneys, or, perhaps, will give combined symptoms from all three. The most frequent noticeable secondary symptoms of the present day are increased rapidity of the heart and dyspnea on slight exertion, some enlargement of the heart, possibly a soft, systolic blow at the apex showing a weakening of the mitral valve, or a slight systolic roughness at the aortic valve showing a stiffening of this valve, as these valves suffer the most from hypertension. Cardiac pains may occur and there may be more or less frequent attacks of "acute indigestion." The rapidity of the heart does not normally lessen on first lying down; in fact, there may be a palpitation and a noticeable uncomfortable activity of the heart. The primary enlargement of the left ventricle, then some slight weakening of the muscle and perhaps an insufficiently closed mitral valve are all well understood when the physical conditions are reviewed.

Dr. Curran Pope, in the *Monthly Cyclopedia and Medical Bulletin,* January, 1910, numerically presents the physics of the circulation. Computing the amount of blood passed through the heart of an average adult man, "the heart, beating at the rate of seventy times a minute, i. e., 4,200 times an hour; 100,800 times daily; and 36,792,000 times annually, would pump on an average two and one-half ounces of blood at each contraction, 175 ounces a minute, 656¼ pounds an hour, or 7½ tons a day," which Pope believes "is equivalent to lifting one ton 122 feet high."

As 30 pounds of blood go through the normal adult heart each three minutes, if the tension of the arteries is increased even 10 mm., to say nothing of 20, 30 and 40 mm. above normal, the amount of extra work that the left ventricle is called on to do can be realized, this increased pressure increasing the resistance to the flow of arterial blood just so much. It is no wonder, then, that with increased blood pressure, whatever be the cause, the heart sooner or later pays the penalty. The disturbed circulation is for some time unnoticed because at first it is an internal disturbance, the dilatable blood vessels of the abdomen being the ones most easily congested by imperfect circulation. This soon causes congestion of the abdominal organs, impaired digestion, and the absorption and circulation of toxins that are irritant to the kidneys and arterial walls.

The principal thing in the prevention of the development of cardiovascular-renal disease after hypertension has been discovered is that the patient, or rather the individual who is not yet even a patient, be made to realize the danger of the condition and what the future means to him if the hypertension is not reduced. This is so very true because nothing that the physician can do will counteract lack of cooperation on the part of the individual. It is he who must take rest, mental and physical; it is he who must take vacations. He must stop excessive eating and drinking of any kind, even if he is not put on an absolutely limited diet. He must reduce, if not actually stop, his tobacco and alcohol if he uses either or both. He must reduce or stop much tea and coffee, and it may not be wise even for him to drink water excessively, as adding so much more work for the circulation. He should realize that he is a subject under scientific observation by his physician, even if he does not tolerate the title of patient.

There can be no dogmatic decision as to what blood pressure is proper for any class of patients. Each patient must be individualized, and the blood-pressure found the best for him should be the one at which it is aimed to keep the circulation. As well pointed out by Sir Lauder Brunton (*British Medical Journal,* July 10, 1909), some persons feel well and are able to work at a tension of 100, while others are absolutely prostrated by such low tension; some feel fine, agile and stimulated by a pressure of 160 and over, while others feel uncomfortable from such high tension. Brunton believes, as is generally recognized, that a tension of 180 mm. or over is always dangerous, while it is generally found that a tension of 100 or under causes lassitude and even debility. However, it seems very important, as just stated, that each patient should be individualized, as an attempt to reduce a high pressure to the normal for the age and sex of the individual is often followed by unpleasant consequences; and the reverse is demonstrable, that when a low blood-pressure is raised too high by vasoconstrictors and cardiac tonics uncomfortable and sometimes dangerous symptoms occur.

All this emphasizes the importance of taking the blood-pressure in every instance of circulatory disturbance and letting the findings decide the treatment, medicinal and dietetic. It is also necessary for perfect management of the patient to take the blood-pressure frequently to see what results are being obtained by the treatment, or whether unpleasant results are occurring. With arteriosclerosis and a weak heart muscle it would seem unwise to give cardiac depressants, although the blood-pressure might be high on account of the difficulty of compressing hardened arteries with the blood-pressure instrument. Repeated observations should be made of heart strength and peripheral circulation before circulatory tonics are given, on the one hand, or circulatory depressants, on the other.

The actual treatment consists in removing any cause for hypertension that can be removed, such as nicotin, alcohol, perhaps coffee and tea (especially if large amounts are taken), excessive amounts of meat or quantities that are unwise for the individual patient, nervous strain, speed, severe athletic work, sudden severe muscular exertion, such as running for a train or car, cranking an automobile or propelling a bicycle uphill. As above stated, one of the most important causes to be removed, if possible, is nervous tension.

An important cause of the condition and a cause that must be remedied is intestinal putrefaction or fermentation, as evidenced by constipation, irregular diarrheas, excessive amount of intestinal gas, and indican in the urine. Constipation should be remedied by the laxative considered best for the individual patient. Bowel antiseptics to be taken any length of time are inadvisable, even if partially successful. Various lactic acid and sour milk preparations may be of marked benefit and may be tried (THE JOURNAL, March 12 and 19, 1910). The most successful means of removing putrefaction of the intestines is by total abstinence from meat and flesh of all kinds. Whether this is advisable in a given patient cannot be determined offhand. The radical substitution of a large amount of vegetables and cereals may cause more gastric and upper intestinal indigestion than is compensated for by the prevention of some of the large intestine disturbance. Generally it will be found best to allow meat at least once a day or possibly twice a day in small amount, and the amount of fruit, vegetables and cereals that tend to keep up nutrition and not cause indigestion. The main fact seems to be that most men under high tension eat rapidly and too much, improperly masticate their food, and drink liquids rapidly, hustle immediately after a meal has been taken, and thus cause intestinal and perhaps gastric indigestion. A correction of this bad habit of eating often alone corrects intestinal disturbances.

The next important necessity and requirement for the prevention of cardiovascular-renal disease is a proper action of the skin and a good circulation in the muscles and surface of the body. Gentle exercise, whether in gymnasiums or at home, by walking or by golf, depending on the individual, will increase muscle and skin circulation and reduce blood-pressure. Warm baths frequently, Turkish baths occasionally, or, better than all hydrotherapeutic measures, body-baking occasionally, will ordinarily reduce the blood-pressure, and if the regulation of the life and habits of the individual have been changed will tend to keep the blood-pressure down for months, if not for years. Massage is not ordinarily required for these active patients whose treatment is now being considered.

It has been repeatedly pointed out in this department of therapeutics that a large amount of water drunk with the intent of removing toxins from the blood, of preventing gout, and of preventing uric acid disturbances and gall-stone deposits is not necessarily valuable and may be a serious regimen for the circulation. This is true if the heart muscle is weak; it is often very true if the kidneys are slightly deficient; and it seems inadvisable when there is hypertension of the arteries. As stated by Dr. Boardman Reed (*California State Journal of Medicine,* September, 1909) excessive amount of any simple food and any simple drink, as water, to say nothing of spring waters, may cause more harm in a patient who has hypertension than a small amount of meat and a small amount of tobacco, tea, coffee, and even alcohol.

Pope (*Monthly Cyclopedia and Medical Bulletin,* February, 1910) suggests electric-light-bath treatments, and recommends the high-frequency electric and static wave currents as all of advantage in lowering the blood-pressure and increasing peripheral circulation. He does not find that the galvanic, faradic and sinusoidal currents are of value. Boardman Reed, on the other hand, thinks gentle faradic electricity is of benefit, and both think mechanical vibrations, especially along the region of the spinal muscles, tend to cause a lowering of pressure.

There can be no question of the advantage of a warm, equitable climate over a severe cold one or one that is subject to frequent rapid changes of temperature for the patient who has hypertension. However, it will be rare that a patient in the early stages of cardiovascular-renal disease can be induced to give up the work of his life for any more than temporary sojourns in distant climate. This emphasizes the fact, however, that such patients, as often as they can take vacations, should go to a region that tends to promote the peripheral circulation.

As pointed out repeatedly for many years by Dr. O. T. Osborne of Yale, any diminution in thyroid secretion tends to raise the blood-pressure, and any increase of suprarenal secretion tends to raise the blood-pressure. Therefore the deduction of the value of small doses of thyroid in hypertension. Thyroid secretion is Nature's method of keeping the blood-pressure normally low, and in hypertension small doses of thyroid extract daily for some time will not only lower the blood-pressure, but stimulate the thyroid gland to more perfect secretion. The dose should not be more than from 0.10 to 0.20 gram (from 1½ to 3 grains) of the official preparation a day. Small doses of iodin, as offered by an iodid, tends to cause the same lowering of blood-pressure, perhaps by the action of the iodin itself and quite supposedly by the stimulant action of the iodin on the thyroid gland. Certain it is that small doses of iodid, preferably sodium iodid, and not more than 0.10 to 0.20 gram (1½ to 3 grains), twice a day, is sufficient to stimulate the thyroid and to cause, after two or three weeks, a distinct lowering of blood-pressure. A thyroid gland once made more active may remain so for months without thyroid or iodid medication, and the blood-pressure may remain low for months, provided the other conditions of life have been properly regulated.

The administration of alkalies as exemplified by sodium bicarbonate and as presented by a larger vegetable diet causes a lowering of the blood-pressure and promotes nitrogen metabolism and elimination, but alkaline drugs should certainly not be long administered. In fact, the prolonged use of any drug is inadvisable in simple hypertension. They may be necessary when arteriosclerosis and cardiac debility are present.

The actual vasodilators, i. e., the nitrites, will most certainly cause active lowering of the blood-pressure, and to accomplish this it is not necessary to give large doses. Although their action is rapid and the apparent results of such action theoretically and laboratorily are short-lived, still the administration of a nitrite three or four times in twenty-four hours tends to and does keep the blood-pressure lower. The most used nitrite for this purpose is nitroglycerin, and the most used dose is probably 1/100 of a grain. However, 1/200 and even 1/400 of a grain in many patients will keep the blood-pressure lower than without it and may cause it to be lower than is agreeable to the patient. If taken after meals or with a large drink of water to cause slow absorption it will not cause flushing of the face or headache. The nitrite of sodium in even so small a dose as 1 grain three times a day, after meals, will often

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[*For other information see second page following reading matter*]

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THE AMERICAN MEDICAL ASSOCIATION—ITS POLICIES AND ITS WORK

VI. THE CHEMICAL LABORATORY

To those who have given the matter any thought it must seem remarkable that until the establishment of the Council on Pharmacy and Chemistry five years ago there was no disinterested, reliable body to which physicians could apply for information regarding proprietary—or for that matter regarding any—medicinal products. That a physician had no means of obtaining unbiased scientific data on the preparations he was using daily in the treatment of disease seems on its face an anomaly. Such was the case, however, and the result was that all information concerning proprietary medicines had to come from those who were commercially interested in their sale. That information from such a source would be so biased as to be well-nigh worthless for scientific purposes might have been expected; that it *was* worthless has been demonstrated.

By far the most important work of the Council has been that of determining the actual composition—as distinct from the alleged composition—of proprietary medicines. To do this work, careful and painstaking chemical analyses were essential, and for such analyses the Council had to depend either on its own members or on chemists connected with commercial laboratories. The arduous duties connected with such work, which of necessity had to be of the most careful and painstaking nature, made it impracticable to expect the chemists on the Council to do it themselves; it was also found unsatisfactory to have it done in commercial laboratories. To meet these difficulties the Council on Pharmacy and Chemistry in its annual report (1906) to the Board of Trustees of the American Medical Association made the following suggestion: "It is hardly necessary to remind you that there is much detail of a chemical nature connected with this work, and while some of the members of the Council have been devoting much time and labor in this direction it is believed that some of this detail work could be done much more satisfactorily if facilities for it were provided by you at the Association's building. Therefore, the Council begs to suggest that if it is possible to do so, a chemical laboratory be established by the Association with a competent chemist in charge. There is a great amount of work to be done, and it is work that must be continued if the medical profession in the future desires to protect itself from unscrupulous promoters."

The Board of Trustees gave the matter careful consideration, and while it fully realized that the establishment of a well-equipped laboratory would entail no small expense, it decided that the crying need for such an institution amply justified any reasonable expenditure. The Board made an appropriation, therefore, and ordered that a portion of the Association's building should be fitted up as a chemical laboratory. This was done, and a space twenty feet deep and the entire width of the building was set aside for laboratory purposes and all the apparatus necessary for analytical chemical research was installed.

The Board was fortunate in being able to secure, to take charge of the laboratory and to act as secretary to the Council, a chemist, who not only ranked high in his profession, but whose familiarity with the conditions and practices of pharmacy and of pharmaceutical manufacturing made him an invaluable asset to the Council's work. As the scope of the laboratory's work widened, one chemist was added to the staff, and, later still, another. Both of these men are expert chemists, one holding the highest degree given by a university whose department of chemistry ranks among the best in the country; the other, also a graduate of one of the leading universities of the country, has done extensive analytical work in the Bureau of Chemistry of the Department of Agriculture at Washington. Thus the Association has at its command chemical and pharmaceutical talent of the highest grade—an item of importance when it is realized how critically the work of the laboratory is examined by those interests whose shortcomings are exposed. In this connection it were worth while to call attention to the fact that, in all the work which the laboratory has done its results have practically never been successfully challenged—a record of which the medical profession may justly be proud and one, too, that is indicative of the grade of work accomplished.

Good apparatus and expert chemists, however, are by no means all of which the laboratory can boast. A most comprehensive and complete reference library containing the latest and best books on chemistry, pharmacy and the allied sciences has been collected, and every important pharmaceutical and chemical journal published in any language is also to be found there.

The average reader may not at first glance appreciate all that this means. It means that the latest and most reliable data concerning new drugs—proprietary or otherwise—from all parts of the world are now at the disposal of the medical profession of America. The larger manufacturing houses have long realized the value of such data for purely commercial purposes and they have been careful to keep in touch with what was going on outside this country and were ever on the watch for anything new which might develop and which could be used by them. Physicians, however, have been among the last to learn the facts regarding new remedies; the information which manufacturers collected so zealously for themselves was not allowed to trickle out among the medical profession until it had been colored, flavored and sophisticated, often out of all likeness with the original, but always into apparent praise of the preparations marketed under trademarked names.

The laboratory has, then, both the equipment and the personnel requisite for the production of the highest type of analytical work. But it has more than this. Since its inception there has been compiled, systematically and thoroughly, the most complete collection of proprietary medicine advertising "literature" to be found anywhere. Such a collection is of inestimable value in tracing, through the devious paths of ever-varying claims for composition and therapeutic virtues, the evolution of many proprietary products now on the market. To see the advertisements put out by different firms a few years ago, and then to compare them with advertisements for the same products to-day, is in itself a revelation of the steady change—for the better—that has taken place in the commercial standards of pharmaceutical manufacturers.

The work that the laboratory has done in exposing, through the pages of THE JOURNAL, the frauds connected with the exploitation of some of the "ethical" proprietaries, is well known. The Council has felt that the medical profession, having vigorously attacked the "ethical" proprietary evil and, to a large degree at least, set its own house in order, could no longer be accused of inconsistency in exposing the broader and more widely-spread frauds of the "patent medicine" traffic. Within the past year, therefore, the laboratory has extended its work to include the examination of some of the more vicious "patent medicines."

In connection with this work there is being made an ever-increasing collection of information on practically every pharmaceutical or medical humbug that has come before the public in recent years. Inquiries for information about medical frauds and fakes are being received daily. A few of these are answered through THE JOURNAL, but the limitations of space make it necessary to answer the great majority by correspondence. As a correlated branch of the laboratory's work, a "testimonial file" has been compiled which contains the names of several thousand physicians who have written testimonials for various proprietary preparations—some for a score or more.

The Association laboratory is a unique institution, and it is doubtful if even yet the medical profession fully appreciates its value. Not that its equipment and organization differ essentially from those of any first-class chemical laboratory; but in the scope of its work and in the absolute independence of its action it has no counterpart. Municipal and state laboratories invariably find their work hampered and their usefulness curtailed by the political considerations which the antagonizing of powerful interests develops; even federal examining bodies are not free from such restrictions. In the Association laboratory such considerations have had no place and it has published work that others would not have dared to publish. For the first time in the history of medicine—not alone in the United States but anywhere—physicians have an imparial, non-commercial scientific body to determine the honesty of the medicinal preparations put up for their use.

What the chemical laboratory has accomplished can not easily be separated from what the Council on Pharmacy and Chemistry has done, for the work and aims of these two institutions have been largely along the same lines. Some things, however, can be credited specifically to the laboratory's account:

It has for instance shown up the worthlessness of many of the widely advertised "ethical" proprietaries and has torn the veil of mystery from some of the most vicious "patent medicines" on the market.

It has made ridiculous in the eyes of the profession the impossible and absurd formulas with which the advertising pages of medical journals—THE JOURNAL among them—used to abound.

It has proved that many combinations of drugs offered to the profession are pharmaceutical impossibilities and scientifically absurd.

It has challenged successfully the attitude previously taken by pharmaceutical manufacturers that no one had a right to publish anything derogatory to their proprietary products.

It has, in short, revolutionized the point of view While the medical profession used to be looked on as fair game for the fraudulent exploiter of worthless or vicious nostrums it is now viewed with a fear tempered by wholesome respect for its increased worldly wisdom on the question of proprietaries.

CANCER IN FISHES

On April 9, the President sent a message to Congress in which he requested that an appropriation of $50,000 be made to provide for the active investigation of problems connected with cancer in fishes. No doubt this request may seem to be a rather strange one at first sight. Why cancer in fishes and not cancer in human beings? Perhaps the President answers this question in his message when he says: "Progress in the prevention and treatment of human diseases has been marvelously aided by the investigation of the same disease in those of the lower animals that are subject to it, and we have every reason to believe that a close investigation into the subject of cancer in fishes which are frequently swept away by an epidemic of it may give us light on this dreadful human scourge."

A great deal has been learned about cancer in fishes during recent years. In addition to being subject to cancer in various organs, occurring in more or less isolated instances, fishes are especially liable to cancer of the thyroid gland. The peculiar feature of the latter form, which affects especially the trout family, is that it not infrequently becomes epidemic in hatcheries and thus constitutes a serious obstacle to artificial propagation.

Numerous and important problems are raised by the frequency of this cancerous process in the thyroid in fishes. Investigations are needed to determine its relationship to the external conditions and to heredity. It has already been found that in a hatchery, previously free from the disease, the introduction of ova from elsewhere may be followed by the appearance of the peculiar tumors in many of the fish raised from the imported ova; and, further, that fish of the indigenous stock kept with the affected also frequently develop the disease. Consequently it seems as if the disease is hereditary as well as contagious.

Possibly the trout may prove a more favorable animal than any other now at our disposal for the experimental study of cancer. In this country fish cancer has been studied by Gaylord of the New York State Cancer Laboratory at Buffalo, who has found epidemic thyroid cancer in several hatcheries in New York. He has pointed out what may be a remarkable circumstance, namely that the area in the United States of the greatest concentration of human cancer is almost identical with the area over which the trout family is distributed. It is chiefly as the result of this work and certain considerations arising out of it that the matter now has come before the national government. We hope that Congress will follow the enlightened policy illustrated by the foundation and maintenance of a cancer laboratory by the legislature of the state of New York—the first laboratory in this country devoted exclusively to the study of cancer—the activities of which should be furthered and enlarged now that such important problems are pressing for solution.

THE SCOPE OF THE PHARMACOPEIA

Now that the rather spirited discussion as to the scope of the Pharmacopoeia is being carried into the columns of the daily press it may be well to stop and consider what the Pharmacopeia is, to whom it belongs and what are the interests of the owners in the question of its scope. The United States Pharmacopeia is the property of the United States Pharmacopeial Convention; the latter is made up of delegates from medical and pharmaceutical colleges and societies and from the three government medical services. The book belongs to this Convention alone; neither the commercial interests nor the officials engaged in the enforcement of the federal and state food and drug laws have as yet any rights in the work. The mere fact that Congress when it passed the Food and Drugs Act adopted the standards of the United States Pharmacopeia and National Formulary for the preparations contained therein does not give the government any rights in the work beyond what the Pharmacopeial Convention sees fit to give it. The United States Government has never appropriated a cent to defray the cost of the preparation of the work and recently when a bill was introduced into Congress which practically provided that the United States assume the burden of revising the Pharmacopeia there was an almost universal protest and none was more emphatic in the condemnation of the whole proposition of government control than some of those now so vigorously protesting against any effort to restrict the usefulness of the Pharmacopeia as a government standard.

Hence, there is no need for those who now control the United States Pharmacopeia to consider the question of establishing standards for drugs in which they are not interested. The interests of the medical and pharmaceutical professions in this matter are largely the same. It is argued that it is to the interest of the public health for all drugs, by whomsoever used, and whether of value or not, to have standards fixed. Admitting the desirability of having standards for these drugs in which physicians are not interested, it plainly devolves on the people themselves (through Congress) to establish such standards. The abilities of the owners of the present Pharmacopeia are already taxed to the utmost to prepare the work on the present lines; the last revision required five years and when it did appear it was far from representing the present-day needs of the physician. Even in the last revision a great deal of time was spent in formulating standards for preparations (whisky for example) in which the modern physician is not greatly interested.

If we are to have a pharmacopeia which is to be a standard, meeting fully the needs of the pure drug and custom-house officials, etc., the only logical thing is to ask Congress to prepare such a work; it is only fair that the government should bear this as well as the other expense connected with the enforcement of customs laws, the Food and Drugs Act, etc. Such an arrangement would have the additional advantage of freedom from possible corruption.

Aside from the injustice of imposing a greatly increased burden on the owners of the present Pharmacopeia, it is contrary to the interests of the public health to have drugs of no known value included in the Pharmacopeia. In spite of all disclaimers to the contrary, pharmacopeial recognition at present is mistaken for endorsement. Some of the most notorious nostrums on the market advertise freely the fact that the ingredients are recognized by the United States Pharmacopeia. We have also the testimony of Dr. Kebler,* chief of the Division of Drugs of the Bureau of Chemistry of the Department of Agriculture, who states: "When we remember that there are promoters of medicines who take advantage of every possible situation that presents itself we should be very circumspect about giving any questionable drug standing." And speaking of phytolacca he says that the makers of "patent" medicines make the reply: "That is recognized in the Pharmacopeia. It is approved by the medical and the pharmaceutical professions."

Those who followed the early prosecutions against the users of wood alcohol in medicinal products will remember the impression made on both jury and judge by the fact that wood alcohol was (through the efforts of a few misinformed physicians and pharmacists, and against the protests of some of the best men in both professions) included for a brief period of three years, in the sixties, in the British Pharmacopeia.

The question of what the next Pharmacopeia is to be, however, rests entirely with its owners, the Pharmacopeial Convention which meets May 10; the physicians who will there represent the medical profession should not allow their attention to be distracted from their duty, which is to consider the interests of the medical profession and the question of public health in its broadest aspect. They are under no obligations to consider the interests of the manufacturers or of the officials engaged in the enforcement of laws if these conflict with the best interests of the profession or the welfare of the public.

DRAKE UNIVERSITY AND MEDICAL EDUCATION

The commendable spirit recently shown[1] by the faculty of Drake University College of Medicine, in voting to close the college rather than to conduct it except as a first-class institution, is an example of the action which representative members of the medical profession are willing to take in order that fair standards of medical education may prevail. This spirit has already been shown in other cities where colleges have been voluntarily closed for similar reasons, or where mergers have been brought about between two or more colleges in order that stronger and better equipped medical schools could be formed. This willingness to forego personal gain in the interest of better trained physicians is a sure indication that the problems of medical education in this country will be satisfactorily solved. But an unexpected turn of events followed the action of the Drake University faculty which may permit the continuance of the medical school. An agitation begun by the medical students may result in the raising of sufficient funds to insure the continuance of the college. It is hoped that this agitation in Des Moines will awaken the people to the fact that they not only have a decided interest in medical education, but also that it is their chief concern that this education be thorough and practical. It would be interesting if this movement led to the development in Des Moines of the same conditions that exist in Cincinnati, where the city is supporting a medical school in connection with its enormous city hospital, thereby insuring not only the best possible care for its sick poor but also that the abundance of clinical material in the latter will be used to the greatest advantage in the training of future physicians.

CLUB PRACTICE RESULTS IN ANTAGONISM TO PHYSICIANS

A striking illustration of the results of club practice appears in a letter from a physician of Budapest published in a recent number of the *Wiener klinische Rundschau.* The letter states that a laboring man recently shot a club physician because the latter, the year before, had reported adversely on his application for sick indemnity. As a result of this and many less serious attacks, the physicians of the *Krankenkassen* sick-clubs have asked the authorities to adopt regulations to protect them against unjustified insults and ill-treatment on the part of members of the clubs. The *Krankenkassen impose* a fine on members guilty of such conduct. but evidently this provision is not enforced or it is not sufficiently stringent to deter members from abusing physicians. The letter adds that although this attack was evidently committed by a man not mentally sound, yet it has a certain significance as showing the feeling on the part of members toward the physicians of the sick-clubs. Part of this may be attributed to the failure on the part of physicians to understand the views of the great mass of working people and to show proper consideration for their patients, but the writer states that the campaign of abuse which has been inaugurated against the reasonable demands of the club physicians has increased the ill feeling of the members toward the physicians. The club physicians seem to be utterly defenseless. The daily press in some cases criticized their meek demands as directly inimical to the laboring classes. These unfortunate conditions have been made possible only through the lack of united action on the part of the Hungarian physicians. And yet it is interesting to note that the writer of the letter referred to states that things are not yet quite bad enough to rouse them to concerted action, and to bring them all into one organization.

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* THE JOURNAL A. M. A., Feb. 5, 1910, p. 439.

[1] See Iowa state news in this issue.

Medical News

ARKANSAS

State Society Meeting.—The annual meeting of the Arkansas Medical Society will be held at Little Rock, May 3-6. Dr. James H. Lenow, Little Rock, is president, and Dr. Morgan Smith, Little Rock, is secretary.

County Societies Elect Officers.—At the annual meeting of the Independence County Medical Society, held at Batesville, April 4, the following officers were elected: President, Dr. O. J. T. Johnston, Floral; vice-president, Dr. T. N. Rodman, Cushman; secretary-treasurer, Dr. Frank A. Gray, Batesville; delegate, Dr. O. J. T. Johnson, Floral.——At the annual meeting of the Garland County Medical Society, held at Hot Springs, April 5, the following officers were elected: President, Dr. Jacob W. McClendon; vice-president, Dr. John F. Rowland; secretary, Dr. John S. Wood; treasurer, Dr. Joseph S. Horner; censor, Dr. S. L. Steers; delegates, Drs. Linda H. Barry and Eugene C. Hay; alternates, Drs. William O. Forbes and Morgan F. Mount, all of Hot Springs.

CALIFORNIA

Awarded Damages.—In the case of Robert Agers against Dr. Edwin Z. Hennesy, Napa, the jury awarded the plaintiff $10,000 damages, April 2, for alleged bad setting of a broken leg.

County Society Elects Officers.—The San Luis Obispo County Medical Society met in San Luis Obispo, March 31, and elected the following officers: President, Dr. H. M. Cox, San Luis Obispo; vice-presidents, Drs. Harry S. Walters, Arroyo Grande; Charles J. McGovern, San Luis Obispo; and William R. Hedgpeth, Paso Robles, and Dr. Richard M. Bradbury, San Luis Obispo, secretary-treasurer.

Hospital News.—Articles of incorporation of the Southern California Sanitarium and Farm Company were filed in San Diego March 19, with a capital stock of $500,000. The corporation will engage in general hospital business.——The temporary receiving hospital, San Diego, has been completed and affords ample facilities for the furnishing of first aid.——Ramona Hospital, San Bernardino, has been completed and is open to receive patients. The building is of the mission type, three stories in height and thoroughly equipped. Dr. Henry W. Mills is in charge of the institution.——The Board of Supervisors of Alameda county passed a resolution, March 13, to secure twenty acres in the city of Oakland as a site for the new county infirmary, which is to cost about $500,000.——The new receiving hospital, Los Angeles, was opened March 6. The institution has a large receiving room, operating room, male and female wards, and *x*-ray room, and has accommodation for ten patients.

CONNECTICUT

Vital Statistics.—During 1909 the health of the state has compared favorably with that of previous years. The death-rate for the year was 15.6 per 1,000; in 1908 it was 15.4, and in 1907, 17.1. The total deaths numbered 16,460, or 460 more than for the previous year. There were 1,164 more births recorded in 1909 than in 1908, or a rate of 25.7 per 1,000, as compared with 24.2. Tuberculosis caused 1,422 deaths, or 1.34 per 1,000 of population. The greatest improvement noted is in deaths from typhoid fever, which numbered 154, or 0.14 per 1,000 of population, as compared with 0.18, 0.20 and 0.22, respectively, during the three previous years.

Campaign Against Flies.—The State Board of Health has issued a warning against the danger of food contamination and transmission of disease by flies. The following rules are laid down:

> Do not allow decaying material of any sort to accumulate on or near your premises.
>
> All refuse which tends in any way to fermentation, such as bedding, straw, paper, waste and vegetable matter, should be disposed of or covered with lime. Keep all receptacles for garbage carefully covered and the cans cleaned or sprinkled with lime.
>
> Keep all stable manure in vault or pit, screened or sprinkled with lime.
>
> See that your sewerage system is in good order; that it does not leak, is up-to-date and not exposed to flies. Pour kerosene into the drains. Burn or bury all table refuse.
>
> Screen all food, whether in the house or exposed for sale.
>
> Keep the flies away from the sick, especially those ill with contagious diseases. Kill every fly that strays into the sick room. His body is covered with disease germs.
>
> While it may be impossible to exterminate all flies, yet the danger and trouble may be greatly lessened by a proper use of screens for doors and windows.

Society Meetings.—The one hundred and eighteenth annual meeting of the Hartford County Medical Association was held in Hartford, April 5, and the following officers were elected: President, Dr. Herman W. Strosser, New Britain; vice-president, Dr. Harmon G. Howe, Hartford; secretary-treasurer, Dr. Frederick B. Willard, Hartford; councilor, Dr. Oliver C. Smith, Hartford; censors, Drs. Edward G. Fox, Wethersfield, Edward R. Lampson, Hartford, and H. A. Deane, South Windsor; and delegates to the state society, Drs. Frederick B. Willard, Michael H. Gill and John H. Rose, Hartford. Erastus P. Swazey, New Britain. Charles M. Wooster, Tariffville; Myron P. Robinson, Windsor Locke, and Thomas Q. Sloan, South Manchester.——The one hundred and eighteenth annual meeting of the New London County Medical Association was held in New London, April 7. The following officers were elected: President, Dr. P. J. Cassidy, Norwich; vice-president, Dr. E. C. Chipman, New London; secretary-treasurer, Dr. E. O. Winship, New London; delegate, Dr. L. F. LaPierre, Norwich; censor, Dr. R. W. Kimball; county reporter, Dr. E. J. Brophy, Norwich.

FLORIDA

Bacteriologic Laboratory to Be Established.—It has been announced that the State Board of Health has decided to establish a complete bacteriologic laboratory in Pensacola at an early date. This is to be done on the recommendation of Dr. Warren E. Anderson, Pensacola.

Personal.—Dr. Ralph N. Greene, Tallahassee, has been elected chief physician at the Florida Hospital for the Insane, Chattahoochee, succeeding Dr. James H. Randolph, resigned; Dr. Benjamin F. Barnes, River Junction, has been elected assistant physician at hospital to succeed Dr. Greene.

State Medical Society Elects.—At the thirty-seventh annual meeting of the Florida Medical Association, held in Jacksonville, April 6-8, the following officers were elected: President, Dr. James D. Love, Jacksonville; vice-presidents, Drs. Albert H. Freeman, Starke; Leon A. Peek, Melbourne; and Fred C. Moore, Tallahassee; secretary-treasurer, Dr. J. D. Fernandez, Jacksonville (reelected); councilors, Drs. Leonidas M. Anderson, Lake City; J. Harris Pierpont, Pensacola, and Henry E. Palmer, Tallahassee, and librarian, Dr. Charles E. Terry, Jacksonville (reelected). Tallahassee was chosen as the place for the next annual meeting.

ILLINOIS

Milk Commission Named.—At a meeting of the Sangamon County Medical Society, April 11, a milk commission composed of the following Springfield physicians was appointed: Drs. Hugh T. Morrison, Samuel E. Munson, Harry C. Blankmeyer, Emil L. Bernard and George T. Palmer. This commission will go into all the facts concerning the establishment of a system of certified milk for Springfield.

Society Meetings.—Tazewell County Medical Association met in Pekin, April 12, and elected the following officers: President, Dr. Harry V. Bailey, Pekin; vice-president, Dr. Harley A. Zinzer, Washington; secretary, Dr. Fernando C. Gale, Pekin; delegate to the state society, Dr. Henry L. Yoder, Morton, and alternate, Dr. Eugene F. Kelchner, Delavan.——At the regular meeting of the Rock Island County Medical Society, held in New Harper, April 12, the following officers were elected: President, Dr. Henry S. Bennett, Moline; vice-presidents, Drs. Warner L. Eddy, Milan, and Joseph E. Asay, Rock Island; secretary, Dr. Albert N. Mueller, Rock Island; and treasurer, Dr. Arthur T. Leipold, Moline.

Personal.—Dr. and Mrs. John A. Koch, Quincy, sail April 23 for a six-months' trip abroad.——Dr. Daniel D. Brengle, Winchester, one of the oldest physicians in the state, is critically ill.——Dr. John M. Gulick, Manteno, was operated on at Mercy Hospital, Chicago, for appendicitis, recently.——Dr. Edward A. Foley, Kankakee, has been appointed assistant superintendent of the Anna State Hospital.——Dr. Charles E. Crawford, city health officer of Rockford, has returned from a trip to California and other western points.——Drs. Walter S. Haines and Walter H. Allport, Chicago, have been appointed members of the State Commission on Occupational Diseases, succeeding Drs. Alice Hamilton and Arnold C. Klebs, Chicago, resigned.

INDIANA

Physician Wins Suit.—In the case of Mrs. William H. Miers against Dr. George S. Crawford, Milford, for alleged malpractice, a jury in Shelby circuit court, on April 14, returned a verdict in favor of Dr. Crawford.

Personal.—Dr. Samuel Hollis, Hartford City, has been elected secretary of the county board of health, vice Dr. William N. Cronin, Hartford City, deceased.——Dr. Burton D. Myers, Bloomington, started for Europe, March 19.

State Board Ruling.—The State Board of Health has made a ruling that the pure food laws must be conformed to in the strictest sense of the letter. The order specifies that beginning with July 1, bread shall be protected by suitable wrapping paper or be placed in bags before being taken from bakeshops, and that all other goods from bakeries shall be carried in tight, dustproof boxes or cartons. The order that applies to butchers and wholesale meat dealers will go into effect on May 15, and is as stringent as the one governing bakeries.

February Mortality and Morbidity.—During the month there were 2,856 deaths, or 99 fewer than for the corresponding month of last year, a rate of 13.4, the rate of February last year being 14. There were 394 deaths of infants under 1 year of age, or 13.7 per cent. of the total; 163 deaths of children from 1 to 5, and 953 of individuals 65 and over, or 33.3 per cent. of the total. Influenza was the most prevalent disease, pneumonia was fifth in area of prevalence, and in February of last year it was third. Following is the order of disease prevalence: Influenza, tonsillitis, measles, bronchitis, pneumonia, rheumatism, scarlet fever, pleuritis, diphtheria and membranous croup, chickenpox, whooping-cough, typhoid, diarrhea, smallpox, intermittent and remittent fever, erysipelas, cerebrospinal meningitis, inflammation of the bowels, cholera morbus, puerperal fever, dysentery, typhomalaria fever, and cholera infantum.

IOWA

Medical Society Reorganized.—The old Keokuk Medical Society, which has been in existence for sixty years, was reorganized March 21, and Dr. Joseph A. Scroggs, Keokuk, was elected president.

Unlicensed Practitioner Fined.—Dr. Renshaw, Logan, arrested and indicted for practicing medicine in Harrison county without a license, pleaded guilty, March 30, and was fined $300.

Drake University College of Medicine Not to Close.—At a recent meeting the faculty of Drake University College of Medicine voted to discontinue the college after the close of the present session owing to the fact that sufficient money was not available to make needed improvements in the laboratories and to provide for the growing expenses for maintenance. On learning of the faculty's action a demonstration begun by the medical students has so aroused the citizens of Des Moines that ample funds may be subscribed to insure the continuance of the college. The improvements which are now practically assured are a new laboratory building on the university campus, a larger use of the hospital wards of the city, and the raising of $100,000 for maintenance, of which sum $40,000 has already been subscribed.

Personal.—Dr. Murdoch Bannister, Ottumwa, has been appointed by the governor as a member of the Board of Control of State Institutions.——Dr. Charles E. Boyd, Newton, has returned from abroad.——Dr. James M. Donelan has been reappointed health officer for Glenwood and Glenwood township.——Dr. Warrick W. Klein, Waterloo, sustained severe injury to both legs, necessitating their amputation above the ankles, by falling from a moving train while rounding a sharp curve, March 17.——Dr. Henry H. Nichols, Marshalltown, is a patient in St. Thomas Hospital, having submitted to an emergency operation for an abscess of the chest.——Dr. Harry R. Reynolds, Clinton, has been appointed a member of the board of pension examiners for the district, vice Dr. Christian Jonsson, deceased.——Dr. Carl C. Lytle, Lansing, underwent an operation for appendicitis at Mercy Hospital, Dubuque, April 4.——Dr. Edgar H. Jones has been appointed city physician and city health officer of Eldora.

LOUISIANA

Personal.—Drs. J. Hope Lamb and Henry A. Veazie, New Orleans, have been reappointed inspectors of all vessels coming from fruit ports in Central America and foreign places.——Dr. Whyte Glendower Owen, Whitecastle, has been appointed by President Taft as one of the three surgeons from Louisiana to a place on the inactive list of the Medical Reserve Corps, United States Army, with the rank of first lieutenant.——Dr. Oscar Dowling, Shreveport, has removed to New Orleans to take up the work of the late Dr. Gordon King.

County Societies Elect Officers.—The Grant Parish Medical Society met at Colfax, March 30, and elected the following officers: President, Dr. Philip Goode, Colfax; vice-president, Dr. W. A. Fletcher, New Verda; secretary, Dr. J. Luther Kelley; and treasurer, Dr. E. B. Gray, Colfax.——The Winn Parish Medical Society met at Winnfield, April 6, and elected the following officers: President, Dr. Carson R. Reed, Grace; vice-president, Dr. J. B. Parker, Sikes, and secretary-treasurer, Dr. S. Clyde Fittz, Winnfield.——At the annual meeting of the East Feliciana Parish Medical Society in Jackson, April 6, the following officers were elected: President, Dr. Jesse W. Lea, Jackson; vice-president, Dr. William F. Hagaman, Norwood; and secretary-treasurer, Dr. Robert P. Jones, Clinton.

MARYLAND

Coming Meeting.—The one hundred and twelfth annual meeting of the Medical and Chirurgical Faculty of Maryland will be held in Baltimore, April 26, 27 and 28, under the presidency of Dr. G. Milton Linthicum, Baltimore. The secretary is Dr. John Ruhräh, Baltimore.

Appropriations for Hospitals.—Annapolis has received an appropriation of $30,000 for the completion of the Emergency Hospital building, in addition to the usual appropriation of $5,000 a year for maintenance.——Johns Hopkins University has received the appropriation of $25,000, asked for by it, and Mercy Hospital, Maryland General Hospital, and the University of Maryland Hospital, Baltimore, have received an appropriation of $13,000 each per year.

Hospital and Dispensary News.—Extensive improvements will be made at the Springfield Asylum for the Insane, $270,000 having been appropriated by the state for the purpose.——An electric plant will be installed at Bayview Hospital, which will also provide for Sydenham Hospital for Infectious Diseases.——The dispensary of St. Agnes' Hopital, which has been closed for sixteen years, was reopened April 5, the medical staff of the hospital being in charge.

Bills Vetoed and Approved.—The governor has vetoed the "optometry" bill, much to the gratification of the medical profession. This bill aimed to create a special class of "optometrists," with examining board, license, etc. He also vetoed bills for incorporating the State University of Maryland; for requiring full Pasteur treatment for persons bitten by rabid animals, and for authorizing the sale of condensed skimmed milk. He approved the bills for the reorganization of the State Board of Health into five departments, but reducing the annual appropriation for expenses to $10,000; the midwifery bill; for a woman physician for the Baltimore juvenile court; for a bond issue of $100,000 for the State Tuberculosis Sanatorium at Sabillasville, for buildings, and $75,000 a year for maintenance; and requiring that tuberculin shall bear a label.

Baltimore

Johns Hopkins University Raising Fund.—The Johns Hopkins University is endeavoring to raise $2,000,000, to enable it to move to the new suburban site, Homewood, and to branch out in various directions. A department of preventive medicine is one of the new features proposed.

Personal.—Dr. Robert W. Johnson has been elected vice-president of the Churchmen's Club.——Dr. Lewis M. Allen was elected president of the Maryland Alumni Association of the University of Virginia, April 9.——Dr. William A. Fisher has resigned the office of assistant surgeon of the Fifth Regiment, Maryland National Guard.

MINNESOTA

Personal.—The University of Minnesota has appointed Dr. Thomas G. Lee, Minneapolis, director of the Institute of Anatomy, as its delegate to the second International Anatomic Congress, Brussels, and to the eighth International Zoologic Congress, Graz, Austria. Dr. Lee sailed for Europe April 9, and will spend the summer in visiting laboratories in the interest of the new institute, which is to cost $200,000.——Drs. A. E. Ahrens and S. G. Cobb, St. Paul, have gone to Vienna for five months' postgraduate work.

NEW HAMPSHIRE

State Medical Society Meeting.—The one hundred and nineteenth annual meeting of the New Hampshire Medical Society will be held in Concord, May 12 and 13. Dr. Frank Blaisdell is president and Dr. D. E. Sullivan, secretary.

National Department of Health Approved.—At a meeting of the Center District Medical Society, held at the State Hospital, Concord, April 11, resolutions were unanimously adopted favoring Senate Bill 6049 for the establishment of a national department of health, and urging that the Committee on Legislation of the American Medical Association and the representatives of New Hampshire in Congress support the bill.

County Society Elects Officers.—The fifth annual meeting of the Hillsboro County Medical Society was held in Manchester, April 6, when the following officers were elected: President, Dr. John H. Gleason, Manchester; vice-president, Dr. Herbert L. Smith, Nashua; secretary-treasurer, Dr. Ella B. Atherton, Nashua; executive committee, Drs. Frank Blaisdell. Goffstown; Arthur F. Sumner, Manchester; William E. Reed, Nashua; Joseph W. Finerty, Milford, and Guy H. Greeley, Merrimack; delegates to the state medical society, Drs. George S. Foster, Manchester; Frank E. Kittredge, Nashua; and Nathaniel F. Cheever, Greenfield; auditor, Dr. James B. Pettingill, Amherst.

NEW YORK

Scarlet Fever Epidemic.—An epidemic of scarlet fever has appeared along the Putnam division of the New York Central Railroad starting at Amawalk; from there it spread to Yorktown Heights, to Kitchawan, Millwood, Briercliff Manor and Ardsley.

Cases of Communicable Diseases Reported During February.—There were reported during February 3,203 cases of tuberculosis; 2,025 cases of diphtheria and croup; 4,118 of scarlet fever; 10,047 cases of measles; 566 cases of typhoid; 32 cases of cerebrospinal meningitis; 46 cases of smallpox, and 4 cases of ophthalmia neonatorum.

Mortality from Pulmonary Tuberculosis.—The mortalities of the state from this disease for quinquennial periods since 1885 have been as follows: 1885-1889, yearly average 11,913, percentage of all deaths, 12.6; 1890-1894, 13.339 yearly average, 11.0 percentage of all deaths; 1895-1899, 13,313 yearly average, 10.9 percentage of all deaths; 1900-1904, 13,458 yearly average, 10.4 percentage of all deaths; 1905-1909, 14,557 yearly average, 10.1 percentage of all deaths.

From Legislative Halls.—The assembly has passed a bill prohibiting the sale of cocain and other drugs without proper restrictions.——The senate has also passed Senator McManus' bill empowering the New York City Health Department to establish dental stations to care for the teeth of children under 14 years of age who cannot afford to pay for such treatment.——The assembly has passed the bill which would give to the Board of Estimate and Apportionment in New York City the right by resolution to determine that there shall be in the City of New York a board of inebriety. When the board determines this it will be incumbent on the mayor to appoint such a board which shall consist of seven members, two of whom shall be physicians. The board is given authority to purchase a site for a hospital and industrial colony for the care and treatment of inebriates within or without the City of New York. After the Board of Inebriety is appointed any male person who is a resident of New York City and who is adjudged by a court of record to be an inebriate may on his own application or the petition of a relative or a commissioner of public charities or of the Board of Trustees of Bellevue and the Allied Hospitals and on the certificate of two medical examiners in lunacy be committed by such court to the board for a period of not less than one year nor more than three years. The provisions of law relating to the commitment of insane persons shall so far as may be practicable apply to the commitment of inebriates.——A bill has been introduced amending the health law by relaxing the present restrictions against the admission of unvaccinated pupils to the public schools by requiring such admission on a duly executed certificate of a physician that the pupil's health would be jeopdized by vaccination, or on a written declaration of the parent or guardian of the pupil to the effect that he is conscientiously opposed to vaccination.——Among the bills reported on favorably was that one giving State Health Commissioner Eugene H. Porter increased jurisdiction over the discharge of sewage and industrial wastes into public waters.——Governor Hughes has signed the Merritt bill appropriating $1,231,500 for state hospital maintenance.

New York City

Another Building for Physicians.—A new office building for physicians and dentists exclusively is being erected at No. 40 East Forty-first street. Among the attractions offered are a sterilizing plant; a laundry, a buffet-restaurant and a sunroom.

Junior Sea Breeze to Reopen.—This station has been in operation for four years and has been sustained entirely by Mr. Rockefeller. Two physicians, twenty-two nurses, and two dieticians will be in attendance at the camp and four nurses will devote their time to the education of the mothers in the tenement homes.

Personal.—Prof. F. Lange of Munich, recently arrived here as a representative of Germany to the orthopedic congress to be held at Washington.——Dr. William Hallock Park, professor of bacteriology and hygiene in the University of New York, will receive the honorary degree of LL.D. from Queen's University of Kingston, Ont., this month.

Pathologic Laboratory for Hospital.—Adolph Lewisohn has given $130,000 more to Mount Sinai Hospital for the purpose of building and equipping a pathologic laboratory. The new laboratory will be known as the Mount Sinai Pathologic Laboratory, Adolph Lewisohn Foundation. The site for the new building has been purchased on One Hundredth street near the hospital proper. Mr. Lewisohn some time ago made a gift of $70,000 to the hospital.

Reception and Dinner to Dr. Jacobi.—The Medical Society of the State of New York will give a reception on the evening of May 6, at the New York Academy of Medicine, New York City, in honor of the eightieth birthday anniversary of Dr. Abraham Jacobi.——Invitations have been issued by the board of directors of the Hospital for Deformities and Joint Diseases for a dinner in honor of Dr. Abraham Jacobi, the senior consultant of the hospital, to be given at the Waldorf on April 20.

PENNSYLVANIA

Nurses Receive State Licenses.—Three hundred and thirty-nine nurses have just received from the Pennsylvania State Board of Examiners for the Registration of Nurses; notification that they have passed the necessary examinations and have been registered to practice in this state. The next meeting of the board for the examination of nurses who desire registration will be held in Pittsburg, April 21. The board proposes to hold meetings in various sections of the state, so that it may learn the needs of the various localities and get in touch with the physicians and nurses, in an effort to see that the nurse registration act passed by the legislature is being properly observed.

Tuberculosis Society Names New Officers.—Complete reorganization of the Pennsylvania Society for the Prevention of Tuberculosis, took place at the nineteenth annual meeting held April 13. Dr. James Tyson, who recently retired from the chair of medicine at the University of Pennsylvania, was unanimously elected to the presidency, Dr. Charles J. Hatfield, the incumbent, retiring. The other officers elected are: Vice-presidents, Drs. W. D. Robinson, Philadelphia, William Charles White, Pittsburg, and Charles H. Miner, Wilkes-Barre; treasurer, George Burnham, Jr.; secretary, Dr. Ward Brinton, Philadelphia; solicitor, Samuel Scoville, Jr.; directors, Drs. Joseph Walsh, Charles J. Hatfield, C. Lincoln Furbush, A. P. Francine, F. A. Craig, J. Clinton Foltz, J. Willoughby-Irwin, all of Philadelphia; Messrs. Alexander Wilson, Asa S. Wing, L. J. Palmer, Henry H. Collins, Jr., Alfred C. Scattergood, Mrs. William T. Jenks, Mrs. Lawrence Lewis and Miss Henrietta Ely.

State Examination of School Children.—State Health Commissioner Dixon has completed the medical inspection of the rural district schools in Dauphin, Cumberland and Lancaster counties. This work will form a basis of examination of school children in the rural districts throughout the entire state. Children examined in 572 schools numbered 12,255. Of the total number 2,439 children presented one or more physical defects tending to handicap them in their school work; 1,929 children showed defective vision, 249 defective hearing, 284 defective nasal breathing, and 55 presented conditions that would lead the inspector to suspect the existence of tuberculosis. Eleven inspectors in Dauphin, 9 in Cumberland and 35 in Lancaster made the examinations in these three counties, from one to three townships being assigned to each physician. The inspectors also made a thorough investigation of the sanitary conditions existing at the schools. On receiving the reports at the central bureau at Harrisburg, the chief medical inspector and his assistants go over them carefully, and letters are written to the parents of the children in whom physical defects are found, calling attention to these defects and suggesting that the child be taken to the family physician for more detailed examination and treatment.

Philadelphia

Von Eiselsberg Conducts Clinic.—Dr. Anton von Eiselsberg, professor of surgery in the University of Vienna, conducted a surgical clinic in the Jefferson Medical College Hospital, April 13.

Banquet to Dr. Cohen.—Dr. Jacob Solis Cohen was the guest of honor at the tenth annual banquet of the Northern Medical Association, the occasion being the fiftieth anniversary of Dr. Cohen's graduation from the University of Pennsylvania. Department of Medicine.

Cocain Sellers Fined.—George and Charles Rollins pleaded guilty before Judge Carr, April 7, to the indictment charging them with unlawfully selling cocain and having the drug in their possession, and were sentenced to pay a fine of $500 each and to serve two years in prison.

Food Commissioner Plans Arrests.—April 15, Food Commissioner Foust ordered a renewal of the crusade against Philadelphia dealers for the sale of partly decomposed eggs, known in the trade as "rots and spots." The fine for the offense is from $200 to $1,000, with imprisonment if the court may decide that it should be added.

Resident Physicians Appointed.—The senior medical appointments of the University of Pennsylvania were announced April 4. The men who have been assigned to the University Hospital are: I. G. Clark, R. M. Lewis, L. H. Langdon, F. S. Sproul, I. W. Cook and P. McCall Keating. The successful men were selected from the list of twenty who had obtained the highest scolastic average on February 1.

Personal.—Dr. and Mrs. James A. Irwin sailed for Italy April 19.——Dr. Joseph Leidy, who has been spending the winter with his family in Switzerland, returned to his home April 15.——Dr. Charles H. Frazier, who was recently operated on at the University Hospital for appendicitis, is rapidly recovering.——Dr. H. R. Owen, a police surgeon, has been appointed a member of the staff of surgeons at the Philadelphia General Hospital, to succeed Dr. J. Chalmers DaCosta, resigned. ——Dr. J. M. Fisher has been appointed associate professor of gynecology at the Jefferson Medical College.

Report of the Bureau of Health for February.—The report of the division of medical inspection shows 2,421 inspections, excluding schools, 5,130 total visits to schools were made; 722 children excluded from school and 84 cases held for special diagnosis; 743 fumigations ordered, 137 cultures taken, 301 injections of antitoxin and 279 vaccinations.——The report of the division of vital statistics shows 2,435 deaths reported and 2,611 births.——The report of the division of milk inspection shows that 7,677 inspections were made in which 178,959 quarts were inspected, condemning 98 quarts.——The report of the bacteriologic laboratory shows that 1,302 examinations of diphtheria, 279 of suspected typhoid blood, 843 of milk, and 199 of sputum were made. 7 disinfection tests were performed, and 8,911,200 units of antitoxin were distributed.

Charitable Bequests.—A bequest of $3,000 to the Methodist Hospital was included in the will of the late Maria Snyder. ——From an estate valued at $50,000 left by the late Mary H. Griffith the sum of $500 is bequeathed to the Bryn Mawr Hospital.——The will of the late Kate E. Hetzell bequeathed $200 to the Philadelphia Home for Incurables.——The will of the late Annie E. Travers contains the following bequests: $300 to St. Joseph's Orphan Asylum; $200 to St. Vincent's Home; $200 to St. Joseph's Orphan Asylum for Girls and $200 to St. Joseph's Working Home for Boys.——In the will of the late Caroline M. Scholkelmann, bequests of $100 each are made to the Little Sisters of the Poor of Germantown, St. Vincent's Orphan Asylum of Tacony and St. Mary's Hospital.——One thousand dollars has been received by the Aid Association of the Philadelphia County Medical Association from the estate of Mrs. Caroline E. Richmond. Mrs. Richmond left the money to be distributed among charitable institutions to Dr. Richard A. Cleeman.

Open-Air Schools Urged.—At the monthly meeting of the Board of Education held April 12, the Committee on Special Schools brought up the question of introducing open-air schools in connection with the public school system of this city. Open-air schools, designed especially for sick and weakly children, have been in operation in many European cities for about six years. In this country, the plan has been successful in New York, Boston, Pittsburg, Chicago, Hartford and Rochester. Those who now urge the adoption of the plan in Philadelphia, include C. C. Harrison, provost of the University of Pennsylvania, Dr. James Tyson, George Burnham, Rev. Joseph Krauskopf, Dr. Talcott Williams, Dr. John H. Musser, Dr. W. W. Keen, Dr. George Woodward, John Converse and Samuel F. Houston. It was also suggested that the Philadelphia Department of Health should be asked to furnish the services of a qualified school physician to examine pupils who are referred or apply for admission to such schools, that he should have general oversight of the diet and treatment of the pupils and should be required to maintain such a system of health records as will enable him to prescribe for their treatment and determine their improvement.

GENERAL NEWS AND COMMENT

Personal.—William C. Rucker, passed assistant surgeon in the United States Public Health and Marine-Hospital Service, has been made a member of the London Society of Tropical Medicine.

Coming Meeting.—The sixth annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held at the New Willard Hotel, Washington, D. C., May 2 and 3. All members are expected to make their own hotel arrangements. The president is Dr. Edward G. Janeway, New York City, and the executive secretary, Dr. Livingston Farrand, New York City. The Sociological Section, under the chairmanship of Mr. Bernard Flexner, Louisville, will take up "A Budget and Program for a Local Anti-Tuberculosis Campaign," "The Question of Enforcement," the "Enforcement of Anti-Spitting Ordinances in the United States" and "The School Child and Tuberculosis." The clinical and pathological sections will take up the medical side of the subject.

Work of the Milk and Baby Hygiene Association.—The report of the Milk and Baby Hygiene Association of Boston to March 1, 1910, is a pamphlet of about 40 pages, giving an outline of the work attempted by the association and its results. It contains numerous illustrations of its milk stations, dairies, etc., and charts and tables concerning infant mortality, its causes and distribution throughout the different months of the year. Among the babies under the care of the association during 1909 the death-rate was 33⅓ per cent. less than for the babies not under their care. Mothers are persuaded to nurse their babies and the death-rate has been found in the experience of the association to vary from 1.9 per cent. in wholly breast-fed infants to 4.68 per cent. in those partially breast-fed and up to 9.55 per cent. in those fed on carefully modified milk. Ten people's milk stations in charge of seven trained nurses are maintained; and modified, inspected and certified milk, and infants' sanitary feeding-bottles and nipples are sold at cost. Conferences have been organized with twenty-four volunteer physicians to instruct mothers in the care and nourishment of their children. There are also a class for high-school girls and lectures to fathers and other groups. Tracts on the care of children are distributed, and by the use of special phonograph cylinders and graphic exhibits the educational influence of the organization is extended. The association also takes part in the propaganda for a better city milk-supply and better methods of handling, cooperates with the public health authorities and takes part in hearings before the legislature.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 9, 1910.

Changes in Regard to Coroners' Inquests

As foreshadowed in previous letters important changes are about to be made in the antiquated law of coroners' inquests which dates from the thirteenth century. Fifteen months ago the home secretary appointed a committee to inquire into the subject and it has just issued a report. The committee reports astonishment at the good work done by coroners with out-of-date and imperfect machinery. At present the coroner has power to order a post-mortem examination only for the purpose of an inquest. The committee thinks that it is most desirable that he should have power to do so without an inquest when the cause of death is unknown and there is no reason to suspect that the death is unnatural or violent. An inquest is always a painful ordeal for friends and relatives, and by dispensing with it trouble and expense would be saved. The fees allowed to medical witnesses are regarded as inadequate. In many cases the postmortem examination can be effectively made only by a pathologic expert who can at present be paid not more than $5. Every coroner should be empowered to call such medical witnesses as may be necessary and should have a wider discretion as regards medical costs. The viewing of the body by the jury is now obligatory and to many jurymen is most disagreeable. The committee holds that the viewing is useful only in exceptional cases. As a rule it is only a perfunctory march past and quite futile. Generally, therefore, it should be dispensed with; but in special cases the coroner should have power to order it. The present law of death certification is condemned. A doctor can give a death certificate if he has seen a patient within a week of the alleged death, and it is not necessary for him to see the body and verify the fact of death. The law offers every opportunity for premature burial and every facility for the concealment of crime. The committee recommends that the physician should be required to inspect the body and that in every case in which a medical certificate is not given the death ought to be reported to the coroner, who, however, need hold an inquest only when he thinks it necessary. The verdict in cases of suicide has always been a difficult question. As a rule no matter what the facts, juries avoid the verdict of *felo de se* in order to spare the feelings of the relatives and bring in a verdict of temporary insanity on the slenderest grounds. The committee recommends that the verdict of *felo de se* should be abolished as the members cannot imagine that the fear of it can have any deterrent effect on persons contemplating suicide. Forfeiture of the suicide's property and burial at the cross-roads have long been abolished. The only effect of retaining this verdict is to induce juries to find a verdict of temporary insanity without any evidence to justify it. The committee thinks that the verdict should simply state that the deceased died by his own hand (stating how); but that the jury should be at liberty to add that there is no evidence to show the state of his mind or that at the time of suicide he was of unsound mind.

African Entomologic Research

Active work is now in progress at the natural history department of the British Museum in connection with the African Entomological Research Committee appointed last summer by the government. Five thousand dollars has been voted for the purpose and two experienced entomologists, Mr. S. A. Neave and Mr. J. J. Simpson, have been sent to Africa, the former to Nyasaland and the latter to Nigeria. They will not only collect specimens but will interest and instruct such residents in Africa as may be willing to devote some part of their time to entomology. The object is to procure the fullest possible knowledge of the insects of tropical and subtropical Africa. The need for such an organization is rendered necessary by the immense importance of economic entomology, from the viewpoints of public health and commerce. Tropical Africa offers the best example of the development of a fertile country being hampered by the widespread occurrence of insects which convey such diseases as sleeping sickness, yellow fever, malaria, plague and several diseases of animals. The committee proposes to issue a journal which will be called the *Bulletin of Entomological Research*, and will contain the observations made by field workers which may have any bearing on the subject of economic entomology, descriptions of insect life histories, figures of their earlier stages, methods of destroying or keeping in check noxious species, papers by specialists on the classification of such groups as are known to be or likely to be injurious to man, live stock or agriculture. The requirements of medical men, farmers, etc., who have no special knowledge of entomology, will also be kept in view and fully illustrated papers will be issued from time to time showing as simply as possible the characters by which the most important pests can be recognized.

The Midwives Act

The midwives act of 1902 has now come fully into force and has revolutionized the nursing of lying-in women. Previous to that date, any woman, skilled or unskilled, could pursue the occupation of midwife without interference by the state. By the act no woman may "habitually and for gain" attend women in childbirth unless she be certified, which requires a course of training and the passing of an examination. The date at which the act was to come fully into force was postponed until the present year to give time for a sufficient number of women to be trained. A central midwives board was established for the purpose of framing rules for the issue of certificates, the conditions of admission to the roll of midwives, the course of training and the conduct of examinations. At one time it was feared that when the act came fully into force there would not be a sufficient number of midwives but this has not proved true. The number on the roll now amounts to 29,000, nearly as many as the physicians in the country. The introduction of the midwives act received considerable opposition from the medical profession who objected to the creation of an "inferior order of practitioner," the members of which were necessarily incompletely educated and trained in the practice of midwifery. But even before the passing of the act only a minority of the labors in the country were attended by physicians and many catastrophes, especially the communication of puerperal fever, arose from the ignorance of the midwives. Under the act, the midwives are subject to strict discipline, the practice of antisepsis is compulsory, and they are empowered only to attend normal labor; in case of any complication they must send for a physician. Some friction with the medical profession in the working of the act has arisen from the fact that the law while rendering this obligatory, made no provision for the payment of the phyisician. However, that difficulty is now being surmounted by the local poor-law authority becoming responsible for the fee.

The Perils of Altruism

At a meeting of the Haselmere Eugenics Club an address was delivered on the "Care and Control of the Feeble-Minded" by Judge Parker, who made a remarkable pronouncement on the perils of altruism from the eugenic standpoint. Referring to proposed legislation on the subject under discussion he said that for the first time in the history of the country it recognized that all proposals for social reform must be judged from considerations, not on the individuals of existing society, but on their ultimate effect on the unborn—on the inborn character of the race. The last 100 years of our history, he said, had seen a development of altruistic feelings which had led to the enlargement of the sphere in which a sense of duty to one's neighbor was the compelling force and had led the state to reform the conditions of life among the less fortunate classes. On the one hand, charitable institutions were endowed on an unprecedented scale, and on the other hand there was a vast extension of ameliorative legislation, such as the factory acts and the education acts. But those altruistic actions were primarily concerned with

Nature had no mercy on the weakly, yet t

were most valued in man were always directed toward succoring the weakly. But in succoring them were we multiplying their numbers and perpetuating the very condition against which our moral nature rebelled? The fact was that in legislation we wanted wisdom as well as enthusiasm for ideals.

The Definition of an "Accident"

An important decision on an appeal under the Workmen's Compensation Act has been given by the highest court in Great Britain—the House of Lords. A workman while in the act of tightening a nut with a spanner made an exclamation and fell back dead. Necropsy showed that death was due to rupture of an aneurism of the aorta. The aneurism was in such an advanced condition that it might have burst while the deceased was asleep and very slight exertion would have been sufficient to bring about rupture. The judge in the local court awarded the widow $1,500 damages on the ground that the death was due to accident but the emloyers appealed to the higher court where the award was upheld. They then further appealed to the House of Lords. In giving judgment the lord chancellor confirmed the decision of the lower courts. He said that for the workman's dependents to be entitled to compensation the injury must be caused by an accident. An accident had been defined in that court as "an unlooked-for mishap or an untoward event, which is not expected or designed." The crucial point was: Did the accident arise out of the employment? When the man's condition was such that he might have died in his sleep and the mere tightening of the nut with no more than the ordinary strain of such work caused the accident could it be said that the "accident arose out of the employment?" No importance could be attached to the fact that the strain was not above the ordinary. If this point had to be considered there must be some standard of exertion for each trade. Nor should any importance be attached to the state of the man's health. If this had to be considered there should be some standard of health varying with different ages. In each case the arbitrator ought to consider whether in substance, so far as he can judge, the accident came from the disease alone or whether the employment contributed to it. In other words, did the man die from the disease alone or from the disease and the employment together? Of the other judges Lord Macnaghten and Lord Collins concurred with the Lord Chancellor, but Lord Atkinson and Lord Shaw differed. Lord Atkinson said that on the evidence either the natural termination of the disease, rupture, was reached unaffected by the work the deceased was doing, or the work accelerated the termination. The inevitable or highly probable result of a disease could not be termed an accident. In agreeing with this view Lord Shaw said that if such occurrences were to be termed accidents a new peril would be introduced into the lives of many workers who, notwithstanding debility and chronic diseases, are anxious and willing to devote their remaining powers to earning a livelihood. As has been pointed out in previous letters to The Journal, the fear expressed by the last judge has already been realized. Employers always insure against the liabilities of the Workmens' Compensation Act. Insurance companies refuse to take at ordinary rates men suffering from defects which increase the risk of accident, though these defects often in no way prevent the workman from following his occupation. The act is therefore a cause of unemployment.

PARIS LETTER

(From Our Regular Correspondent)

Paris, April 8, 1910.

Third International Congress of Physiotherapy

The opening session of the third international congress of physiotherapy, now in progress in Paris, took place March 29 under the presidency of M. Fallières, president of the republic. Professor Landouzy, dean of the college of medicine and president of the congress, made a speech in which he traced the evolution of physiotherapy. Dr. H. Vaquez then outlined the history of the two preceding congresses. Among the countries taking part are the United States, England, Germany, Italy and Belgium.

A feature of this congress is an exposition organized by Dr. A. Weil, which includes exhibits illustrative of thermal and climatic resorts, apparatus for hydrotherapy, aerotherapy, thermotherapy, electrotherapy, radiotherapy, etc., as well as foodstuffs and exhibits illustrating dietetic régimes. One section is devoted to books and reviews of physiotherapy. In a retrospective section of physiotherapy is found the apparatus used by Duchenne of Boulogne.

Projected Law on Abortion

The minister of justice has just laid before the bureau of the Chamber of Deputies a bill to modify the present law on abortion. Because of the excessive severity of the penalties, like hard labor, which the present law lays on the guilty woman as well as on her accomplices, those who are guilty are often acquitted, so that there is at present almost no check on abortion. Thus in 1908, out of 66 accused, 53 were acquitted. In order to escape this serious difficulty the new bill mitigates the penalties for abortion, replacing hard labor and a minimum of five years in a house of correction by imprisonment and fine. At the same time—and this is the new feature—the bill punishes incitement to abortion. There has been for some time an increase of the propaganda in favor of the limitation of births, based on the doctrines of Malthus. Abortion has been advocated through all channels, in speeches, lectures, pamphlets, handbills, newspaper advertisements, placards, etc., and it is hard not to see in a campaign of this kind one of the causes of the depopulation from which France is at present suffering. Against this propaganda French legislation has been up to the present almost disarmed, and it is just this serious want which the bill in question is intended to fill. It imposes a penalty of imprisonment for not more than three years and a fine of not more than 3.000 francs ($600) on the incitement to abortion (whether this incitement shall have been effective or not) by lectures in public places, by the sale or the offering for sale, even though not public, the exhibition, the posting, or the distribution in public places of writings, printed matter, advertisements, sketches, models, drugs, instruments, or any means whatsoever; by their distribution at houses; by the forwarding of such objects in packets or in unsealed envelopes by the postal service or by any agent of distribution or transportation.

Medical Inspection of Schools

The minister of public instruction has just approved a bill organizing the medical inspection of schools and making it obligatory. Up to the present, medical inspection has been organized only in a certain number of communes, especially in the large cities; in the great majority of the little communes nothing has been done.

According to the new bill there is to be medical inspection on the following points:

1. The school buildings and furniture.—The medical inspection service is to be consulted concerning the choice of sites and plans and the arrangements of new educational institutions and is to point out the imperfections in those at present existing and the improvements which should be made.
2. The régime of the schools.—The medical inspection service is to make sure of the observance of rules concerning ventilation, food, heating, lighting, cleanliness, duration of sedentary work, of rest, of sleep, of meals and of physical exercise.
3. The sanitary condition of the pupils.—The medical inspector is to make an inspection of individual pupils at least twice a year. The results of this examination, which is to bear particularly on the conditions of the respiratory organs, the cutaneous system, the organs of sight and hearing and the teeth are to be made a matter of record.
4. The observance of conditions imposed on the members of the educational staff by the hygienic regulations.
5. Special hygienic measures relative to tuberculosis and contagious diseases.

The medical inspector is also to record the amount of instruction which the pupils have received in hygiene.

The remuneration of medical inspectors has been established according to a scale differing for the urban centers and for the rural neighborhoods, where the schools are often far apart from each other. For each school the basis of remuneration is the number of pupils enrolled and not that of the pupils present the day of the visit.

The International Lannelongue Medal

Dr. Lannelongue, professor of surgical pathology at the Paris college of medicine, has just informed the Paris Surgical Society that he has founded a prize consisting of a gold medal, to be awarded every five years, and endowed by a sum of $1,000 (5,000 francs). This medal is to be international, that is, it is to be awarded to the surgeon of whatsoever country, who during the preceding ten years shall have made the most celebrated surgical discovery or performed the works which are most useful for the art and science of surgery. This medal cannot be awarded twice consecutively to the same nationality. It is to be awarded only to candidates presented by (1), the board of the Société Nationale de Chirurgie; (2) one-fourth of the other active and honorary members of the society, chosen by lot every five years; (3) the winners of the Lannelongue medal, and (4) the surgeons who are members of the faculty of ten medical colleges outside of France, two in each nationality to be chosen for the task every five years by the board of the French Société Nationale de Chirurgie. Among the nationalities from which the judges will be drawn will be the United States and Canada, as well as the South American countries. The foreign surgeons will be invited to propose a candidate; the nominations must be made before November 15 of the year preceding the annual session of the surgical society.

The New Tax on Automobiles

The Chamber of Deputies has just voted an increase of the tax on automobiles, composed of a fixed vehicle tax and a tax proportionate to the horse-power. The vehicle tax is at Paris $10 (50 francs) for a carriage with two seats and $18 (90 francs) for a carriage with more than two seats. In the provinces it varies according to the size of the population of the cities, between $4 and $8 for a carriage with two seats and between $8 and $15 for a carriage with more than two seats. Under the proportional tax a 12-horse-power car with more than two seats will pay $30 (150 francs) in Paris and a car of 100-horse-power, with more than two seats, will pay in Paris $246 (1,230 francs). Licensed physicians will always have a right to be taxed at half rate.

Death of Professor Gréhant

M. Nestor Gréhant, professor of general physiology at the Museum of Natural History and member of the Académie de Médecine, has just died, aged 72. He was known especially for his researches on the gases of the blood, on the poisons of the air and on carbon monoxid. In one of my letters (The Journal, Feb. 6, 1909, lii, 487) I mentioned his researches to promote the safety of mines and prevent fire-damp catastrophes.

Death of Dr. Hennequin

Dr. Hennequin, member of the Société de Chirurgie, who was an advocate of continuous extension in the treatment of fractures, died March 24. His remarkably ingenious devices were celebrated, and he was often called on by heads of the hospital services of Paris to apply them. A few years ago, in collaboration with his pupil, Dr. R. Loewy, he published a treatise on the practical treatment of fractures of the long bones.

The Number of Medical Students in France in 1910

The Ministry of Public Instruction has just published the results of the annual investigation into the number of students in the French universities. On January 15 last, there were in our 16 universities a total of 40,131 students, male and female, of whom almost half (17,512) are in Paris. Of this number the colleges and schools of medicine had at that date 9.721 students (8.029 medical students in the colleges and 1,692 in the schools). After Paris, which has 2,857 medical students, the colleges are ranked in the following order, according to the number of students: Lyons (746), Bordeaux (740), Montpellier (504). Nancy, Toulouse, Lille and Algiers. Among the schools Marseilles is at the head with 285 students, then Rennes and Nantes. Out of the total of 9.721 medical students enrolled in the colleges and schools there are 1,143 foreign students, among whom the Russians are most numerous (515 at Paris, 137 at Montpellier, 29 at Nancy, etc.); then come the Turks (62 at Paris), the Roumanians (43 at Paris), the Greeks, the Bulgarians, etc. The colleges and schools of medicine are attended by a total of 1,074 women students, of whom 565 are French women and 509 foreigners. The Paris college of medicine alone has 508 women students and that of Montpellier 117. The students of pharmacy number 1,448.

Imposition of a Special Tax at the Climatic and Mineral Water Stations

The Chamber of Deputies has just passed a bill according to which the communes which possess mineral springs or climatic advantages may be officially recognized as mineral water or climatic resorts or "stations." On their own demand, these stations may be authorized to collect during the whole or part of the year a special tax, the revenue from which may be entirely devoted to sanitation or to embellishments intended to increase the popularity of the resorts. The stations also may undertake the treatment of the poor. The tax in question is a tax on transients not domiciled in the commune. The rate may be so much for each person for each day of sojourn, or so much per person independent of the duration of the stay. It may be based on the nature and the price of the lodgings occupied, etc. In any case the tax will not be due from any one longer than a month. The bill provides, moreover, for the formation of a permanent commission, under the ministry of the interior, mineral water and climatic stations of France.

A Projected Organization of Medical First Aid on the Public Thoroughfares of Paris

At its last general assembly the Medical Syndicate of Paris again considered the organization of a service of medical aid on the public thoroughfares. There are, at present, first-aid stations in connection with all police stations, where persons injured on the public thoroughfares are first taken, and where are found medicines, dressings and means of transportation for injured persons, but no physicians. Unfortunately, the administration, up to the present, has concerned itself only with the transportation of injured persons to the hospitals, and has completely neglected the organization of the service to give immediate medical attention on the spot. There is, however, in Paris a night medical service which gives excellent results (THE JOURNAL, Oct. 9, 1909, liii, 1201), and it may be asked why the organization which works satisfactorily from 10 in the evening until 7 in the morning, every night, cannot be utilized from 7 in the morning until 10 in the evening. Of course, it is difficult to find physicians at their offices every hour in the day, but for a system of first aid by day, analogous to the night first aid, about thirty physicians would be sufficient in each quarter, each one being present at his office or at the first-aid post for two or three hours each day for a week. If one remembers in certain arrondissements in Paris, there are each day, on an average, three accidents or attacks of illness on the public thoroughfares, which makes about 20,000 a year. it may easily be seen what valuable service such an organization would render to the population of Paris. The Medical Syndicate of Paris adopted the following resolutions: 1. The first-aid posts in each quarter of Paris should be organized so that first aid should be rendered there by physicians. 2. Policemen should receive orders to take to these posts all those injured or taken ill on the public thoroughfares. 3. The medical service should be supplied by rotation among all the physicians of the quarter who have themselves enrolled. 4. Fees should be regulated by an agreement reached between the administration and the medical service.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 31, 1910.

Personal

Professor Grouven has been appointed director of the policlinic for skin diseases as successor of his former chief, Prof. E. Hoffmann, who, as previously announced, is going to Bonn in place of von Doutrelepont. Here a certain bargain has occurred which allows one to infer certain transactions behind the scenes. Other vacancies in the universities have been filled in a similar way, only that the bargain is not always so plain as here.

Medical Sunday Rest

For a long time physicians have been trying to obtain some respite from the slavery of their profession, at least on Sundays and holidays. This has been partly secured by the agreement of certain physicians for a mutual exchange of services, so that alternately on a Sunday or a holiday one of the physicians is on duty and the other at leisure. In recognition of this justifiable effort, the administration of the kingdom of Saxony a short time ago published a decree which officially brings this arrangement to the knowledge of the public. According to the decree, inasmuch as it is often difficult on Sundays and holidays to obtain prompt medical aid, a voluntary medical service has been established in Dresden and Leipsic for Sundays and holidays according to which physicians shall in turn remain at home, and every one who is in need of medical services can learn the name and residence of the physician who is on duty, either at the residences of physicians or at the police stations. This arrangement is not only in the interest of the general convenience of the public but also a benefit to the physicians themselves as they can enjoy better rest on Sundays and at night than formerly. As a similar arrangement should be established in other cities and in the large rural communities where there are several physicians, the district authorities of places where it appears suitable are urged to cooperate with the proper authorities as well as with the medical societies of the district in an advisory way.

Campaign Against Infant Mortality in Bavaria

In a decree of the government published a few weeks ago the principles that are to govern the managing authorities and district physicians in the matter of infant hygiene are stated. Three departments are made: Outside care of infants, institutional care, and the protection of mothers and guardianship of illegitimate children. In the outside care the greatest stress is laid on educational measures, which are to be carried out, (1) by the distribution of leaflets; (2) the publication of a professional journal by the Bavarian bureau for hygiene of infants and the recommendation of good books on the care of mother and child, and (3) the delivery of lectures. The outside care will be further promoted by consulting stations, nursing premiums. midwife premiums and lying-in assistance.

The consulting stations under the supervision of physicians are to advise mothers in the care of healthy and sick infants, to encourage breast feeding and to improve the capacity of mothers in this respect where necessary. Premiums are to be given in the form of money or provisions to compensate for the decreased earning power of nursing mothers. No investigation as to worthiness and no distinction between legitimate and illegitimate children will be made, the object being to preserve the life of the infant.

Midwives are to be given prizes to induce women to nurse their infants or to take them to the consulting stations. Milk depots are to be established in close connection with the consulting stations, under the supervision of physicians, to furnish raw milk to nursing mothers or properly modified milk for infants requiring it, and also unobjectionable milk for older children. Artificial food is to be given only when paid for. Milk for infants is to be given only on prescription and fixed milk mixtures are to be avoided. Communities or societies by payment at the milk depots can get tickets for distribution to the poor.

Homes and crèches are to be established to receive children for the first three years, without reference to religion or parentage, for daily care at the cost of the food furnished. The crèches will meet the needs of working women, and will be under the daily supervision of a physician. Not more than six infants or twenty older children are to be placed under one nurse, and nutrition is to receive special attention. Mothers are to be given opportunity to nurse their children in the institution, and the institutions are to be located in factory districts convenient of access to working mothers. To avoid the spread of contagious diseases, crèches are to be separate from institutions for continuous care, and isolation rooms are to be provided for cases of suspected illness. Firms employing nursing women shall allow them time for nursing their infants without deduction of pay.

Sanatoria are to be provided for the medical treatment of infants with acute diseases, and are to receive especially unprotected and abandoned children requiring institutional care. Nursing mothers are to be admitted in limited number to supply natural nourishment in case of need. Nurses will be trained in these institutions.

Provision is to be made that working women shall be relieved from severe bodily labor in the last weeks of their pregnancies. Intelligence bureaus are to be established in th country to advise women regarding these arrangements. In larger communities homes for lying-in women and mothers are to be established for women needing care after delivery or for whom no appropriate home is provided.

Pharmacology

VACCINE VIRUS AND TETANUS ANTITOXIN

Committee of Section on Pathology and Physiology Recommends Their Admission to the Pharmacopeia

To the Section on Pathology and Physiology: Your committee recommends that vaccine virus and tetanus antitoxin be admitted to the Pharmacopeia, and submits the following report:

VACCINE VIRUS

Vaccine virus was the first and it is the oldest and best specific preventive known. It is a drug in the broadest sense of the term, and as such is handled by every pharmacist. One of the first advantages in admitting vaccine virus into the Pharmacopeia would be to establish for it an official and legal name. This would help to avoid much confusion now existing on account of the bacterial vaccines and other substances called "vaccines" used in the prevention and cure of disease. For almost a hundred years vaccination was a specific term limited to the introduction of the virus of vaccinia into the skin for the prevention of smallpox. In recent years the term "vaccination" has been used in a generic sense to include the introduction of many different substances, in many different ways and for many different purposes. To establish a definite and accurate nomenclature is one of the most important functions of the Pharmacopeia.

To include vaccine virus in the Pharmacopeia would be one of the best means of calling the attention of all pharmacists to the fact that it must be kept in a cool, dry place, etc. Much of the vaccine virus on the market is inert, because not properly handled in the trade. Hence, concise, authoritative directions in the Pharmacopeia would have an educational value and would help to prevent smallpox and save life.

The objection that vaccine virus is an indefinite substance, the "active principle" of which is not known, is no longer valid, for the Pharmacopeia contains many such substances, including the ferments, against which a similar objection holds.

The objection that vaccine virus cannot be "assayed" by the average druggist also lacks force when we recall that the potency and purity of vaccine virus in interstate traffic is cared for by the federal government under the law of July 1, 1902, which relieves the pharmacist of the responsibility. Further, other substances, such as serum antidiphthericum, the testing of which requires special training and special laboratories, have been admitted to the Pharmacopeia.

The Pharmacopeia should briefly state the essential requirements of the law above mentioned concerning false labeling or marking of any package or container of vaccine virus; requiring further that each package of vaccine virus must be plainly marked with the proper name of the article, the name, address and license number of the manufacturer, and the date beyond which the contents cannot be expected, beyond reasonable doubt, to give specific results. Such information in the hands of every druggist will serve an educational purpose and also help the federal authorities in the rigid enforcement of the law.

The Pharmacopeia should briefly state the method of preparing vaccine virus and specify the difference between glycerinated preparations and dry points and the other forms on the market. As a precedent, it may be stated, that the Belgian Pharmacopeia (third edition, 1906, page 194), has introduced vaccine virus under the title of "vaccinum" and the Swiss Pharmacopeia (fourth edition, 1907, page 512), has introduced vaccine virus as "vaccinum," synonyms: "Kuhpockenimpfstoff," "vaccine," "vaccin jennèrien," "vaccino jenneriano."

TETANUS ANTITOXIN

We recommend that tetanus antitoxin be admitted into the Pharmacopeia for the reason that this is now a well-established, useful prophylactic; that its mode of action is understood, and that a satisfactory method of standardization exists by which uniform potency is assured.

An American unit for measuring tetanus antitoxin was established on the authority of the act of July 1, 1902, by the Public Health and Marine-Hospital Service (see Hygienic Laboratory Bulletin No. 43). This unit was promulgated Oct. 25, 1907, and is now used by all the manufacturers of tetanus antitoxin in this country, and in some cases abroad.

Tetanus antitoxin should be admitted into the Pharmacopeia on the same terms, with similar definition and similar text to that used in the case of diphtheria antitoxin.

On account of the lack of methods for determining satisfactorily the potency of other biologic products, we think it advisable not to admit them into this revision of the Pharmacopeia.

E. R. Baldwin,
George H. Weaver,
M. J. Rosenau,
Committee.

Iron Tropon

An inquiry has been received as to the composition and value of Iron Tropon. The composition of this product seems to have varied from time to time. The manufacturers formerly stated that it contained fat, sugar, pepsin and iron in organic combination with albumin, and its use was advocated both as a food and as a medicine. It was not claimed to contain over 1 per cent. of pepsin, but tests failed to show that it contained any pepsin, or if any, such a small amount that there was not sufficient to digest the albumin in Iron Tropon itself. It was also claimed that the iron, being in organic combination with the albumin, possessed advantages over the widely used aromatic fluid preparations of iron. Tests, however, showed that the iron was not in organic combination, though even had it been, late investigations fail to demonstrate the superiority of the organic over inorganic iron compounds.

The manufacturers state in their later "literature" that Iron Tropon is a tonic and a food; that it is a compound of the food albumin tropon, 2.5 per cent. of iron in its most assimilable form, and enough chocolate to flavor it agreeably. It will be noted that they now make no claim for pepsin, nor do they state that it contains iron in organic form. In the dose recommended, a teaspoonful three times a day for an adult, the patient gets something over a grain of iron, and he might as well take an equivalent quantity of Blaud's mass, the value of which has been proved.

As a food, Iron Tropon, weight for weight, is about equal to beans and a little better than flour, although it contains a larger percentage of protein than either. In the dose stated, an invalid would get about 50 calories, or about 1/40 the necessary nourishment for a day. Tests also have shown that the albumin is difficult of digestion. In spite of this fact, the advertisement of Iron Tropon states: "A patient who takes Iron Tropon receives not only the benefit of iron medication, but at the same time his economy is supplied with perfectly assimilable albumin in sufficient quantity." It will thus be seen that the claim for pepsin in this preparation has been abandoned, that the statement as to the iron being in organic form has been modified, and that the food value of the albumin is exaggerated; but perhaps the manufacturers do not expect the physician to apply his arithmetic to such problems.

Iridium

Dr. C. A. Dexter, Columbus, Ga., asks for information concerning the use of iridium in the treatment of acute and chronic rheumatism. Iridium is a well-known element although we have not found that it has been used as a medicine; however, we presume our correspondent refers to "Iridium (Medicinal)," sold by the Platinum Company of America. We are not able to locate this company, but in their advertising circular "Iridium (Medicinal)" is said to be "an agent for the blood, a laxative, an alterative, indicated in all disorders of the stomach, in Jacksonian epilepsy," and "a specific in rheumatism." As to its origin, it is said in the circular, "the platinum sands are associated with and composed of iridium" and some other elements, so that as far as the circular gives information the nostrum is alleged to contain the element iridium.

A few statements quoted from the circular will show that the person who wrote it knows nothing about medicine and cannot correctly use the English language: "The qualifications of Medicinal Iridium are its simplicity, purity, harmless under prolonged use, easily borne by the stomach." "It has been observed that when Medicinal Iridium acts as a laxative, it will regulate the same." "Called the family group, Iridium and Osmium are destined to become the world's benefactors in medicinal properties, thereby creating a new chapter in medical science." The circular quotes some supposed "excerpts from hundreds of letters on file, written by physicians, in the hope they may attract your attention." which bear marks of having been written by the same person who wrote the circular. Note the quality of the following statements: "Iridium has a power, purity and simplicity that pleases me; now I can make progress." "I say to you frankly, Iridium is my standard. I can get results and make progress. I am confident it aids the fibrin in the blood." "Dr. X. is pushing Iridium on five or six cases." It is not explained who Dr. X. is, but it has this to say about him: "Dr. X. is an eminent practitioner. He has made a remarkable record with Iridium and has so far never failed on cases of Jacksonian epilepsy, experimental tests have shown that Iridium increases blood corpuscles."

The man who signs himself president of the Platinum Company of America is said to be a lawyer, but is not working at it, and was formerly a promoter, fiscal agent, etc. It should not be difficult for the physician to fix the status of iridium under this sort of exploitation.

Mrs. Winslow's Soothing Syrup—Another Baby Sacrificed

Numerous cases of poisoning have been reported[1] at different times in The Journal from the use of "soothing syrups" administered to infants. "Kopp's Baby's Friend" and "Mrs. Winslow's Soothing Syrup" have proved especially vicious in this connection. The newspapers recently contained a news item from Cheyenne, Wyoming, to the effect that an infant had been accidentally poisoned by its mother administering a "patent soothing syrup"—the name of the nostrum not being given. Dr. C. Y. Beard, Cheyenne, Wyoming, who was reported as having been called in just before the infant's death occurred, writes as follows in response to our request for the facts:

"I was called at 2:30 a. m., March 26, 1910, to see Edna N., a well-nourished babe of ten months. I found the child lying on the bed, breathing somewhat irregularly, but very slowly; there was noisy gurgling in the throat from retained secretions; the skin was waxy and somewhat cyanotic; the pulse about 50 and intermittent; the limbs were cold; there were pin-point pupils; the limbs and abdomen were insensible to pinching and to the extremes of heat and cold; the child could not be aroused enough to swallow. The usual stimulation from atropin, strychnin and alcohol with external heat failed to revive the child, who died at 4 a. m. On first inquiry the mother said the child had been given no medicine internally, but when I insisted that it was under an opiate she admitted the child was cross the afternoon before, and that an old lady advised giving her a dose of Mrs. Winslow's Soothing Syrup. This was secured from a nearby drugstore, and one teaspoonful, the designated dose, was administered about 5 p. m. The babe soon exhibited restlessness, which lasted about thirty minutes. She then fell into a sleep which they thought a very natural one until about midnight, when she began tossing her head from side to side with no motion of limbs or body. It was then found that she could not be aroused. The family physician was called, but he was out of town and I was summoned. A verdict of 'Accidental poisoning from morphin contained in Mrs. Winslow's Soothing Syrup' was given at the coroner's inquest."

Correspondence

Circulatory Changes in Chronic Nephritis

To the Editor:—In your editorial in The Journal, March 19, on "The Circulatory Changes in Chronic Nephritis," you review a purely mechanical explanation, and a theory that you call "the alternative hypothesis," attributing the cardiac and vascular phenomena of chronic nephritis to chemical excitation of the walls of the vessels by pathologic constituents of the blood.

I suggest the propriety of considering another theory. I have formed a belief that the high blood pressure found in cases of defective kidney action is a compensatory phenomenon. Whenever any functional activity is required of an organ in the body, there is always a tendency to a rise of blood pressure, just as an engine puts on more steam to go up hill. When the kidneys are required to remove from the blood waste products circulating in it, there is a tendency to increased blood pressure. When the kidneys are permanently defective, this increase of blood pressure becomes permanent, resulting in changes in the heart and blood vessels, due to a constant demand for a high blood pressure. Clinical studies of the relations of blood pressure have been to me almost a life work so I cannot in the space of a letter enter into a complete elaboration of my own conclusions, though I am sure the mere naming of the theory that the blood pressure of chronic nephritis is a compensatory phenomenon, rather than the mechanical result of obstruction or the chemical result of irritation of the walls of the blood vessels, will be sufficient to suggest the details. The mechanism by which blood pressure is raised is not clearly understood, and it is barely possible that the compensatory demand for a high blood pressure may be supplied through the action of an increased adrenalin formation.

We are not surprised at hypertrophy of the heart when a greater demand is made on it; we are just become accustomed to the idea of hypertrophy of the blood vessels; and we must become accustomed to hyper-development of blood pressure under conditions of greater demand.

Louis F. Bishop, New York.

[Comment: Dr. Bishop's suggestion does not seem to be an attempt at explanation of the physiology of the processes, but only a teleologic theory. While scientific men as a rule hesitate to deal with teleology it does seem probable that the ciculatory changes in chronic nephritis are purposeful; but the important thing for the investigator is to determine, if possible, how the changes are brought about. It was with regard to this point that our editorial was written.—Ed.]

The Double Hernial Sac

To the Editor:—In The Journal (March 26, 1910, liv, 1049) is an article on "Rare Variety of Hernial Sac." Thinking it may be of interest to the readers of The Journal to know how accurately this unusual condition was described at the beginning of the eighteenth century, I give below a translation of a description by Le Blanc (Précis d' opérations de chirurgie, Paris, Méquignon, 1782,i,58) as follows: "The hernial tumor should be examined to see if it is not composed of two hernias. Several practitioners in operating have found two hernias which passed through the ring on the same side and which formed only one tumor in the scrotum. These hernias had each its individual sac, in each of which was contained a loop of intestine or a portion of the omentum or both together." ["Il faut même examiner si la tumeur herniaire n'est pas composée de deux hernies. Plusieurs Practiciens (M. Mery, Mémoires de l'Academie Royale des Sciences ann. 1701, p. 277; M. Mertrud et M. Arnaud, Mémoires de Chirurgie, ann. 1768 Londres, pp. 78-79) ont rencontré en opérant, deux hernies qui passoient l'une et l'autre par l'anneau du même côté; et qui ne formoient qu'une seule et même tumeur dans le scrotum. Ces hernies avoient chacune leur sac particulier, dans chacun desquels étoit contenu une anse d'intestines, ou une portion d' epiploon, ou tous les deux ensemble."]

Walter M. Boothby.

The Dire Possibilities in Handwritten Copy

To the Editor:—One of your compositors—or is it the proofreader?—is a great artist. He made me shed tears. I laughed and cried when I read in The Journal, April 9, page 1220, Latin "incurables," thinking I had written incunabula; my ecstasy increased when on the same page, while I believed that Weir Mitchell was where he belongs, in a haven full of muses, he was reported to have flirted with a "harem full of nurses." Too bad! Please correct.

Would you care to know that other compositors are as accomplished as yours? Here are some corrections they have invented for me. You may enjoy them. I once spoke of a hospital as a source of relief and salvation. They made it "starvation." I spoke of thyroid in different forms of cretinism. They made it "criticism." I quoted Cicero's dictum, according to which unless what we do is useful it is sterile. They made it "striped." I spoke of my Therapeutics of Infancy and Childhood. They made it "Infantry." I meant the modern Hippocrates. They made him "hypocrite."

A. Jacobi.

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[1] Brief abstracts of all these cases are given in the latest edition of the Propaganda for Reform pamphlet

Association News

OFFICIAL CALL

Sixty-First Annual Session of the American Medical Association at St. Louis, June 7-10, 1910

The sixty-first annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 7, 8, 9 and 10, 1910, at St. Louis, Missouri.

The House of Delegates will convene at 10 a. m., Monday, June 6. In the House, the representation of the various constituent associations for the years 1910 to 1912, is as follows:

Alabama	3	Louisiana	2	Ohio	7
Arizona	1	Maine	1	Oklahoma	2
Arkansas	2	Maryland	2	Oregon	1
California	3	Massachusetts	6	Pennsylvania	9
Colorado	2	Michigan	3	Philippine Islands	1
Connecticut	2	Minnesota	2	Rhode Island	1
Delaware	1	Mississippi	2	South Carolina	2
Dist. of Columbia	1	Missouri	5	South Dakota	1
Florida	1	Montana	1	Tennessee	3
Georgia	2	Nebraska	2	Texas	5
Hawaii	1	Nevada	1	Utah	1
Idaho	1	New Hampshire	1	Vermont	1
Illinois	9	New Jersey	3	Virginia	3
Indiana	4	New Mexico	1	Washington	2
Iowa	3	New York	11	West Virginia	2
Kansas	2	North Carolina	2	Wisconsin	3
Kentucky	4	North Dakota	1	Wyoming	1

The twelve scientific Sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy, and the United States Public Health and Marine-Hospital Service are entitled to one delegate each.

The General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 7.

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 6, 7, 8 and 9, and from 9 to 10 a. m. on Friday, June 10.

WILLIAM C. GORGAS, President.

GEORGE H. SIMMONS, General Secretary.

THE ST. LOUIS SESSION

Railroad Rates and Special Trains—Further Announcement by the Committee on Transportation

Since the last report of the Committee on Transportation information has been received from the Southeastern Passenger Association, whose territory embraces states south of the Ohio and the Potomac and east of the Mississippi rivers that a fare of one and one-half cents a mile in each direction will be granted, which is practically a rate of one and one-half fares, the same as the other territories. The Southwestern Passenger Association has granted a rate of two cents a mile in each direction from all points in this territory to the eastern gateways.

In the trans-Missouri territory, which covers the states of Kansas, Colorado, Nebraska, Utah, Wyoming, North Dakota and South Dakota west of Missouri river, the regular tourist rates to Missouri river stations added to one and one-half fare rates from such stations to St. Louis and return will be in force.

For the special trains from Chicago to St. Louis over the Chicago and Alton railroad reservations may now be made of C. R. Davidson, assistant general passenger agent, Rector Bldg., Monroe and Clark streets, Chicago.

For the special trains from Kansas City, reservations may be made of W. H. Abel, assistant general passenger agent, Junction Ticket Office, Ninth and Main streets, Kansas City, Mo.

For the special train from Toledo, Ohio, application should be sent to E. L. Browne, district passenger agent, Clover Leaf Route, Toledo, Ohio.

For reservations over the New York Central lines from New York and the east, apply to L. F. Vosburgh, general eastern passenger agent, 1216 Broadway, New York.

For reservations over the Boston and Albany from Boston apply to A. S. Hanson, Boston.

Reservations should be made as early as possible in order that all may be accommodated.

M. L. HARRIS, Chairman.

Book Notices

CONSTIPATION AND ALLIED INTESTINAL DISORDERS. By Arthur F. Hertz, M.A., Assistant Physician, Physician in Charge of the Electrical Department and Demonstrator of Morbid Anatomy at Guy's Hospital. Cloth. Pp. 344, with 34 illustrations. Price, $4. London: Oxford University Press, 1909.

This monograph is a full consideration of the subject, but includes a great deal of original research by the author, the preliminary account of which gained him the Radcliffe Prize at Oxford University. He has devoted three years to research on the physiology and pathology of movements of the alimentary canal. These studies have been made by observing with the aid of the *x*-ray the movement of test-meals made visible by the admixture of bismuth salts. The book contains many diagrams illustrating the results of such examinations.

The scope of the book will be comprehended when it is stated that about 40 pages are devoted to the physiology of intestinal movements and of defecation; more than 100 pages to causes of constipation; 100 to symptoms and 80 to treatment.

In recent years many have believed that antiperistalsis occurs, but Hertz has failed to see any evidence of it in his numerous experiments and observations. He has seen a bismuth emulsion flow under a pressure of three feet of water from the rectum to the cecum, making the whole colon visible. "But the flow was produced solely by hydrostatic pressure." Moreover, *x*-ray observations show that there is very little variation in the rate of passage through different parts of the colon." The average times taken for a test meal are four and one-half hours to the cecum, six and one-half hours to the hepatic flexure, nine hours to the splenic flexure, and eleven hours to the commencement of the iliac colon. He finds that the progress through the colon is exceedingly slow, except as it is stimulated by meals. Often no appreciable change could be detected after an hour, but the feces advanced considerably after a meal. Hertz confirms Cannon's statement that when the ileum pours its contents into the emmpty cecum characteristic sounds are audible, but he does not agree that they are produced rhythmically.

Owing to the comfort and health of many individuals who defecate only at long intervals it is difficult to define constipation exactly. Our author says that it is "a condition in which none of the residue of a meal taken eight hours after defecation is excreted within forty-eight hours." He divides all cases into two principal classes: first, those in which food is delayed in passing from the stomach to the pelvic colon; second, those in which there is not complete evacuation of the pelvic colon at proper intervals. In the first class passage through the intestines is delayed while defecation is normal, and in the second the reverse is true.

The first class he subdivides, first, into cases with deficient motor activity which may be due to, (a) weak intestinal muscles, (b) deficient reflex activity of the intestines, (c) inhibition of motor activity, and (d) enterospasm; second, into cases due to excessive force required to carry feces to the pelvic colon which may be due to, (a) obstruction by feces or foreign bodies and (b) narrowing of intestinal lumen.

The second class, in which there is defective defecation he subdivides into two groups, first, inefficient defecation from, (a) habitual disregard of call to defecate, (b) weakness of voluntary muscles, (c) unfavorable posture, (d) weakness of reflex, and (e) a hysterical condition; second, obstacles to efficient defecation from, (a) hard and bulky feces, (b) functional and organic stricture of rectum, (c) rectoceles, and (d) invagination. He elaborates this subject interestingly and fully and illustrates it with well-chosen cases.

Under the head of symptoms he discusses those produced by constipation and provocative of it; as well as briefly some of the diseases producing it. It is unnecessary to comment to any extent on this portion of the book. The author does not describe the dyspnea sometimes associated with constipation as well as he might. He says also that albuminuria and cylindruria occasionally result from constipation. Our observation is that they often do.

His discussion of prophylaxis is excellent, although he adds nothing to what is known. Moreover, what is said of treatment can only be commended. The whole subject is thoroughly considered; all the measures from suggestion to surgery are described and their value weighed. In passing it may be noted that he disagrees with many in thinking that olive-oil enemas soften fecal masses less than water. Nevertheless he gives these enemas their full quantum of praise but assigns other and sufficient reasons for their utility.

The book is excellent and the author is to be congratulated on his good work.

A Handbook of Medical Diagnosis. By J. C. Wilson, A.M., M.D., Professor of the Practice of Medicine and Clinical Medicine in the Jefferson Medical College. Cloth. Pp. 1412, with 408 illustrations and 14 full-page plates. Price, $6. Philadelphia: J. B. Lippincott Co.

There are already many excellent books on medical diagnosis. It must have taken a good deal of courage for Dr. Wilson to come on the stage asking the favor of the medical audience for still another work on the same subject. His justification for such an act is, as he tells us in the preface, not only the expressed wishes of colleagues and the needs of successive classes of pupils, but the conviction that something different in method and a new arrangement of details were urgently needed. We confess that before looking at the book critically we were skeptical as to finding much that was new, even in arrangement and method of handling. But it is a pleasure to state that the author has fulfilled his promise and an eminently satisfactory book is the result. The four parts into which the book is divided are: (1) "Medical Diagnosis in General;" (2) "The Methods and Their Immediate Results;" (3) "Symptoms and Signs;" (4) "The Clinical Applications." In a sense each one of these parts is a complete whole. There is little overlapping or repetition. Part 2, for instance, could be printed as a small volume on laboratory and physical methods of examination. Part 3 is a brief yet comprehensive discussion of symptoms and signs and their significance. Here are treated such phenomena as fever, cough, pulse, vomiting, tenesmus, edema, paresthesia, vertigo, convulsions and tremor. In the last part is an excellent and discriminating treatment of the subject of the clinical application of what has gone before, in the diagnosis of medical diseases. The practitioner, therefore, may utilize the book in a variety of ways. He may go directly to the pages discussing the diagnosis of the disease he believes he has in hand or may turn to its most striking symptoms, the interpretation of which is not clear to him, or may find directions as to laboratory technic for tests helpful in diagnosis of the case he has in hand. It is this combination of these four parts, with their distinct characteristics yet intimate correlation, that makes the book especially valuable to the practitioner. Its aim is to be practical rather than theoretical. In this endeavor the author is successful. Little space is taken up with hypotheses and theories, few names of authorities are mentioned, and almost no bibliographic references are given. Criticism on this score might easily be made, for such a plan carries with it more or less of dogmatism in the way of making statements. We feel, however, that our author has been wise in electing to follow this method. We see everywhere the marks of the up-to-date physician of wide experience in hospital and private practice, and the one who knows the needs of the student struggling to master the rudiments of diagnosis and the perplexities of the general physician who becomes tangled in trying to solve the mysteries of the complicated concrete case.

Dr. Wilson's style is scholarly and clear. The illustrations are excellent and most of them really show what they were designed to show; they are in no sense put in for mere display or for padding. The work assigned to others, for instance, nervous diseases, the eye, the stomach, the x-ray, and some of the laboratory work, has been well done. It bears unmistakable evidence of the editorial supervision and active participation of Dr. Wilson. The book, while containing over 1,400 pages is, because of paper and type, not unduly bulky. Larger type, thicker paper, a little increase in the size of illustrations, a little wider spacing, might easily have been employed to make two or even three volumes that would have sold for double the amount charged for this one volume. We feel that the book represents a sincere effort on the part of the author and the publishers to put forth a good, honest book, and that they have succeeded. Whoever buys this work may feel that he has one of the very best.

The Open-Air or Sanatorium Treatment of Pulmonary Tuberculosis. By F. Rufenacht Walters, M.D., Physician to the Crooksbury Sanatorium. Cloth. Pp. 323, with illustrations. Price, $2.25 net. New York: William Wood & Co., 1909.

Dr. Walters has been connected with sanatoriums for consumptives in England for many years and writes this book from abundant experience. There is nothing new in it, but it contains an excellent and full account of what is to-day regarded as the best treatment for tuberculosis of the lungs. It can be heartily commended. If it is to be criticized at all it is because the author has combined two books in one cover, or rather one book and a supplement, for they cannot be read apart. The first half is intended for patients and laymen interested in the subject, as well as for medical men, and the last part for medical men more especially. This causes the consideration of most topics twice in a way which is not agreeable to the reader. Much of the matter in the last part could have been incorporated in the first with advantage to patients, and much of the remainder could have been put in long foot notes; as, for instance, details of the various tuberculin tests, of tuberculin treatment, and of many other subjects.

The author looks on exercise, in cases for which it is adapted, as necessary "to increase resistance to tuberculosis by causing the absorption of a small dose of tubercle poison." The exercise should be "such as will give a dose just short of what will cause constitutional disturbance."

He does not believe in indiscriminate stuffing. Patients whose weight is up to standard need not be fed to gain more. Exercise to harden them may necessitate more food. Moreover, when patients have fever they often need more food. He believes also that most consumptives take too little fat.

The volume contains in its second part much detailed information of importance to physicians treating such patients.

Modern Surgery (. By John C. Da Costa, M.D., Professor Surgery in Jefferson Medical College, Phila Cloth. Price, $5.50 net. Pp. 1502, wit iladelphia: W. B. Saunders Co., 1910.

This work, which has reached its sixth edition in a comparatively few years, has received a number of notices in these columns in the past.

Notwithstanding the fact that it is less than three years since the fifth edition of this surgery appeared, almost every section has been altered or added to for the sixth edition. Among new matter particular mention may be made of arteriorrhaphy, a procedure which is founded on the investigations of Murphy, Carrel and Matas; Crile's arteriovenous anastomosis for effecting transfusion of blood; Brewer's tubes for transfusion; the use of Halsted's aluminum bands in the treatment of aneurism; the operative treatment of recent fractures; Horsley's operation for chronic spinal meningitis; the use of positive and negative air-pressure in intrathoracic surgery. Murphy's method of treating acute peritonitis; Cushing's operation of decompression for brain tumors; Bier's intravenous local anesthesia; the parathyroid glandules; the infraglandular extirpation of goiter; the Lorenz treatment of hip-disease by weight-bearing and fixation; cystoscopy and catheterization of the ureters; Bier's treatment of inflammation; Wright's views on inflammation; immunity with a sketch of antibodies, of opsonins and phagocytosis; bacterial vaccines; Wassermann's reaction for syphilis and numerous other subjects. The new matter added has been judiciously selected, and while the volume has increased somewhat in size it has not yet reached unwieldy proportions. The work is an excellent one and one of the most complete of the single-volume surgeries.

Ionic Surgery in the Treatment of Cancer. With a Chapter on Ionization in Surgical Tuberculosis and in Hemorrhoids. By G. Betton Massey, M.D., Attending Surgeon to American Oncologic Hospital. Cloth. Price, $3. Pp. 239, with 80 illustrations. New York: A. L. Chatterton Co., 1910.

In this book, part of which has appeared in the form of articles in journals devoted to electrotherapeutics, the author urges the giving of greater attention to correct diagnosis in the early stages of malignant growths, and emphasizes the importance of treatment at this time. He discusses the nature of malignant growths, the search for possible cancer germs, and the differential diagnosis, as well as the destruction of these tumors by the local cataphoric diffusion of metallic ions. He gives the details of his method of treatment as well as a description and choice of apparatus. Cases are reported of malignant tumors of various parts of the body cured after ionic treatment, and photographs are reproduced of the patients before and after operation.

THE ESSENTIALS OF CHEMICAL PHYSIOLOGY FOR THE USE OF STUDENTS. By W. D. Halliburton, M. D., Fellow of the Royal College of Physicians. Cloth. Price, $1.50. Pp. 280, with 71 illustrations. Seventh Edition. New York: Longmans' Green & Co., 1909.

When a text-book has run through six editions in a few years its place as a standard may be regarded as established. Halliburton's "Essentials of Chemical Physiology" is exactly what its title proclaims it to be; the essentials of the subject are considered systematically and concisely, while clearness of exposition is not sacrificed to brevity. In this latest edition the author has added, with much discretion and good judgment, the most important recent advances. If the student uses this book as a basis for his study of physiologic chemistry, and does a proper amount of collateral reading from more extensive treatises, he should secure a good understanding of the subject; the danger is that with such a compact little epitome as this he will be content with its contents and fail to seek wider sources of information. We may add a particular word of approval of the expression "chemical physiology," for the reversed term, "physiologic chemistry," has commonly led to a misappreciation of the field covered and objects sought by most of the workers in this branch of science.

EUGENICS. The Science of Human Improvement by Better Breeding. By C. B. Davenport, Carnegie Institution of Washington, Director Department of Experimental Evolution. Cold Spring Harbor, N. Y. Cloth. Price, 50 cents net. Pp. 35. New York: Henry Holt & Co., 1910.

This neatly gotten up booklet contains an essay which the author read by invitation before the American Academy of Medicine at Yale University, Nov. 12, 1909. Davenport adopts unquestioningly the Mendelian theories of heredity and applies them to human mating. Whether all would agree with him in such complete acceptance is a question. Some of his statements appear rather positive, such as that, so far as he is aware, there is no case on record where two imbecile parents have produced a normal child. Considering the relativity of the term "imbecility" and "normal," this assertion might be qualified. There are all degrees of general imbecility and of partial imbecility, which latter is frequently the accompaniment of genius in some other direction. It is also pretty safe to say that a perfectly normal individual is a rarity if he exists anywhere. An investigation into the relation between the "ordinary" and the "normal" human being might be both interesting and enlightening. The investigations along the line taken in this book, however, are in the right direction and the author has stated some approximate truths very well. The family trees given are striking as supporting his views regarding heredity.

LE GLOBULIN DES MAMMIFÈRES. Par le docteur M. Aynaud, Préparateur à la Faculté. Paper. Pp. 229, with illustrations. Paris: G. Steinheil, Editeur, 2 Rue Casimir-Delavigne, 1910.

This monograph on the blood platelets contains a comprehensive discussion of the anatomy, physiology and pathology of these, the least studied of all the blood elements. The author has been associated for some years with Achard in an active investigation of these structures, and includes his own observations with an ample background of the previous work of others, American investigators, we are pleased to notice, receiving recognition. J. H. Wright's important observations would probably receive more consideration by Aynaud if the latter had seen Wright's preparations instead of mere inadequate photographic reproductions. The broad and liberal discussion of the topic assures this monograph a stable place in the literature of a baffling subject, while the simplicity and clarity of the text is refreshing to one who has often had to beat his way through the average German monograph of similar nature and scope.

EMERGENCY SURGERY. For the General Practitioner. By John W. Sluss, M.D., Professor of Anatomy, Indiana University School of Medicine. Second Edition. Flexible Leather. Price, $3.50 net. Pp. 747, with 605 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

The second edition of this book has been changed in certain chapters to meet criticisms offered, additions to others have been made, and it also contains an entirely new chapter on Cesarean section. A number of new illustrations have been added to the large number of the former edition, some of which do not add to its value. Some subjects are still included in the book which could not strictly be regarded as coming under the head of emergency surgery, but perhaps that is not a serious criticism. A serious one is that the author has not advised sufficient caution in the use of spinal anesthesia, which is one of the new topics included in this edition. Spinal anesthesia should not be attempted by the general practitioner, perhaps, nor by any one else outside of a hospital. The inclusion of the new topics has somewhat enlarged the book, which remains a practical and useful guide for the general practitioner, who necessarily does some surgery.

CLAIMS ARISING FROM RESULTS OF PERSONAL INJURIES. The Relation Injury Bears to Disease and Disease to Injury. B. W. Edward Magruder, M.D., Associate Professor of Clinical Medicine, College of Physicians and Surgeons. Cloth. Price, $2.50. Pp. 266. New York: The Spectator Company (1910).

Dr. Magruder's book is a compilation with an extensive bibliography on the relation between injury and disease, with especial reference to the manner in which certain diseases may add to claims for injuries by retarding recovery. Dr. Magruder states in the preface that efforts to find in medical literature the information needed to assist him in passing intelligently on the problems which daily arose in his work led him to the compilation of this volume. Overe fifty diseases are considered with special reference to their relation to injuries. Additional chapters have been added on tumors, x-ray burns, x-ray diagnosis and post-mortem examinations. The book is unique and will be of great value to all physicians engaged in insurance work as well as to lawyers and others needing references to current literature on this subject.

DUNKELFELDBELEUCHTUNG UND ULTRAMIKROSKOPIE IN DER BIOLOGIE UND IN DER MEDIZIN. Von N. Gaidukov. Paper. Price, 8 marks. Pp. 84, with 18 illustrations. Jena: Gustav Fischer, 1910.

A very useful review of the dark-field illumination and ultramicroscopy, with especial reference to medicine and biology, particularly botany. The author's researches lie in the field of the minute structure of cells. The importance of dark-field illumination in recognizing the *Spirochæta pallida* is given due prominence. A full bibliography is appended. The illustrations are good.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

DOSAGE OF ANTIPYRIN

Dr. Claude W. Bankes, Philadelphia, calls attention to an error in a prescription in the Department of Therapeutics, March 26, p. 1059. The dosage of antipyrin is given correctly in the metric system but incorrectly in apothecaries weight, by a typographic error. The prescription should read as follows:

℞	gm. or c.c.		
Antipyrini	3		gr.xl
Syrupi	50	or	f℥iss
Aquæ menthæ piperitæ	ad, 100		ad, f℥iii

M. et Sig.: A teaspoonful, in water, three or four times a day.

This would be the dose of antipyrin for a child from three to four and one-half years of age.

DATA WANTED ON DANGERS OF COMMON COMMUNION CUP

To the Editor:—Please ask your readers if any one can furnish me with well-authenticated history of cases of contagion spread through the use of the "common cup" at the communion table? I shall be most grateful to any one furnishing me with such data, as some of our medical missionaries are having no easy undertaking in their efforts to show some of our clerical missionaries that now, while the church is young here, is the time to introduce the "individual cups" at the Lord's Supper. It is hard for me to understand how any one could object to introducing this reasonable, intelligent, clean and prophylactic measure at this stage of civilization, yet objection is made.

JOHN J. MULLOWNEY,
Methodist Episcopal Mission, Peking, China.

ANSWER.—No authenticated cases of disease traceable to the common communion cup have come to our knowledge. This may be due in part to the facts that the communion cup might not suggest itself readily as a possible source in the history of a case; that infection conveyed through this medium might have a more remote origin (i. e., might have been conveyed by the lips of a healthy individual from an infected cup to the communion cup); and that, in some cases, sentiment might hinder a thorough investigation. The possibility of infection through this source was recognized as early as the fourteenth century, when the prevalence of the plague caused the temporary disuse of the common communion cup (Martin: *Med. Klin.*, Dec. 15, 1907; abstr. in The Journal, March 7, 1908, p. 786). Infection through this medium is an undeniable possibility. Cases of disease transmitted through common drinking cups are on record, and pathogenic bacteria have been cultivated from communion cups after use. (Mueller: *Deutsch. med. Wchnschr.*, April 6, 1905; abstr. in The Journal, May 27, 1905, p. 1722.) The practice of wiping the edge of the cup with a napkin after the use by each communicant offers no absolute security. The only satisfactory prophylactic measure would be the use of individual cups, each one either brought by the communicant for his own use, or, if furnished by the church, sterilized immediately before the service. At the present time, when many states are prohibiting the use of the common cup in public places, and many private concerns are, on their own initiative, abolishing the public cup in their establishments, it seems highly desirable that those institutions which stand as the representatives of religion and morality should not set an example of disregard of public welfare by clinging to a custom which is, to say the least, hygienically under grave suspicion.

DISPOSAL OF HUMAN EXCRETA

To the Editor:—Can you give me any information concerning the disposal of human excreta in small inland towns where a regular sewer system cannot be installed? The common privy or closet system is now in use, but I should like to find a way to improve it. In these towns the flies are not only a nuisance, but positively dangerous, and it occurs to me that by better disposition of the excreta we may be able to decrease the number of flies and possibly eliminate a very fruitful and dangerous source of infection. In my opinion more attention to the elimination of old *Musca domestica* and some of his relatives will greatly simplify the battle with the tubercle bacillus and the numerous enteric infections. Would occasional (say once a week) use of formaldehyde solution be efficient and economical, or would powdered unslaked lime be better?

B. E.

Answer.—Where sewers are not available the dry earth method of treating the excrement is inexpensive and less dangerous than the open privy. In order to prevent the leaching of the liquid portions into the soil with danger of contaminating springs or wells, even at considerable distances away, privy vaults should be built of concrete, or of stone or brick with cement lining. The bottom of the vault should be but a few inches below the level of the ground and should slope toward an opening in order to facilitate the removal of the contents. The receptacle may also be made more cheaply in the shape of a box, large pail or can placed on the ground level. This receptacle may be emptied conveniently, and, if it is of metal and without punctures, it is practically as safe as the concrete or cement-lined vault. Two or three inches of dry earth or ashes should be spread on the bottom of the vault, and each time it is visited a quantity of dry earth or ashes should be thrown down. If the earth used is top soil containing nitrifying bacteria, fermentation and putrefaction will be prevented and destruction of the excrement will be effected. In some army camps crude oil is sprinkled on the dejecta by each one who uses the latrine, a method which is effective in discouraging flies. Flies should be totally excluded from the privy by a close-fitting door, or by a screen if light is admitted. It is of advantage to admit the direct sunlight when the weather will permit for its effect in destroying odors and bacteria, provided that flies can be excluded; otherwise the place had better be dark. The vault should be cleaned often; in summer, about once a week. The work is not very offensive when enough ashes or dry earth is used to take up all the moisture. Besides, the action of the nitrifying bacteria very soon destroys the offensive material. The addition of unslaked lime with earth, as suggested, would also effect this. The use of formaldehyde, besides being expensive, would probably not be effective because it would not reach all portions of the material. When there is sickness in any family, either typhoid or any other transmissible disease, the greatest care should be taken in disposing of the stools of the person affected. They should be rendered liquid and treated with formaldehyde or the other disinfectants commonly used for this purpose before being disposed of in the vault with the dry earth covering. Extra care should of course be taken that no flies have access to these discharges.

If the material from the vault is to be used as fertilizer, it should be remembered that human wastes differ from the wastes of the lower animals chiefly in being much richer in nitrogenous matter, from which ammonia, and, finally, nitric acid, are derived. Consequently, unless thoroughly decomposed and mixed with large quantities of earth before being applied, they are destructive of plant life. From the point of view of human hygiene, it would be safest not to use such material around plants from which food is obtained, or, at least, not around those plants in which the edible product comes in contact with the soil, such as most vegetables and trailing small fruits, like strawberries.

A far better method of purification and disposal of sewage, which may be employed by individual property owners, though at some expense, is that by means of septic tanks or settling tanks, with removal of the residue at long intervals. This method is available where houses are provided with running water, either from a public supply or by means of the individual compressed air or gravity systems, which are frequently used now in country towns or on farms.

As to the elimination of flies, one of the most frequent breeding places of the domestic fly is in horse-manure, and other means besides exclusion from human feces would have to be employed to prevent the multiplication of this pest. If horse-manure is kept cleaned up in the stable and thrown into a screened bin or at once scattered, the fly nuisance in a community will be eliminated to a considerable extent.

The subject of sewage disposal in small towns is discussed in a paper by Dr. G. B. Lake in the *Journal of the Indiana State Medical Association* for February, 1909; abstracted in The Journal, March 27, 1909, p. 1062. References to other articles appearing in The Journal are as follows:

Fuller: Water-Supply and Sewage Disposal, The Journal, Oct. 7, 1905, p. 1059.

Moore: Sewage Purification by Septic Tank and Chemical Precipitation, The Journal, Aug. 24, 1907, p. 677.

Baker: Sewage Disposal—the Septic Tank, *Ill. Med. Jour.*, September, 1907; abstr. in The Journal, June 22, 1907, p. 2150.

Starkey: Economical Purification of Sewage in Rural Districts, *Brit. Med. Jour.*, Sept. 14, 1907; abstr. in The Journal, Oct. 12, 1907, p. 1314.

The lack of privies among the poor classes, especially in some parts of the South and the custom of depositing excretions on the ground, with the consequent soil pollution, are regarded as perhaps the most prolific means of the spread of the hookworm infection. A great campaign has been inaugurated throughout the South to do away with this custom and with the open privy, to which flies, birds, pigs and dogs have access, by which means also the hookworm infection is spread. The establishment of some sort of inclosed privies by means of which the dejecta can be taken care of properly is one of the necessary measures in the elimination of hookworm disease in the South.

The Public Service

Medical Department of the Army

Changes for the week ended April 16, 1910:

Baker, David, major, detailed instructor Camp of Instruction for infantry officers of the organized militia, State of Florida, St. Augustine, Fla., May 16 to 20, 1910.

Van Dusen, James W., major, left Fort Riley, Kan., en route to Fort Leavenworth, Kan., for duty as member of a general court martial to meet at that station April 11, 1910.

Bourke, James, capt., ordered to accompany detachment of troops from Fort Leavenworth, Kan., to the Presidio of San Francisco On completion of this duty to return to his proper station.

Beeuwkes, Henry, 1st lieut., M. R. C., ordered to proceed to New York City, on official business pertaining to the Medical Department.

Wing, Frank F., dental surgeon, on arrival at San Francisco, will proceed to Fort D. A. Russell, Wyo., for duty at that station.

Mason, George L., dental surgeon, on arrival at San Francisco, will proceed to Fort Snelling, Minn., for duty at that station.

Skinner, George A., major, relieved from duty at Fort Lawton, Wash., and ordered to Fort D. A. Russell, Wyo., for duty.

Marrow, Charles E., major, relieved from duty at Fort D. A. Russell, Wyo., and ordered to Fort Lawton, Washington, for duty.

Maus, Louis M., col., left Chicago, on 10 days' leave of absence.

Gunckel, George I., dental surgeon, returned to Fort McPherson, Ga., from temporary duty at Fort Moultrie, S. C.

Oliver, Robert T., E. S. D. S., reports departure from detached duty at Fort Slocum, en route to his station; Fort Hamilton, N. Y.

Stearns, Charles H., 1st lieut., M. R. C., granted 15 days' leave of absence about May 10, 1910.

Powell, William A., capt., granted 3 months' leave of absence, with permission to go beyond the sea, when relieved from duty in the Philippine Division.

Holland, Josiah H., 1st lieut., M. R. C., granted 10 days' leave of absence.

Baker, Charles L., 1st lieut., M. R. C., will report to Capt. E. S. Wright, 1st Cavalry, Presidio of San Francisco, to accompany and for duty with troops to be stationed in Sequoia National Park, Cal.

Boards of Officers of the Medical Corps are appointed to meet at the places designated for the purpose of conducting examinations of applicants for appointment as 1st Lieutenants in the Medical Reserve Corps: Ancon, Canal Zone, Panama; Fort Andrews, Mass.; The Army General Hospital, San Francisco; Fort Banks, Mass.; Fort Benjamin Harrison, Ind.; Columbus Barracks, Ohio; Fo Crook, Neb.; Fort D. A. Russell, Wyo.; Fort Des Moines, Iowa; Fort Douglas, Utah; Fort Ethan Allen, Vt.; Fort George Wright, Wash.; Fort Howard, Md.; Jackson Barracks, La.; Fort Jay, N. Y.; Jefferson Barracks, Mo.; Fort Lawton, Wash.; Fort Leavenworth, Kan.; Fort Lincoln, N. D.; Fort Logan, Colo.; Fort Logan H. Roots, Ark.; Fort McHenry, Md.; Fort McIntosh, Tex.; Fort McKinley, Me.; Fort McPherson, Ga.; Fort Meade, S. D.; Fort Monroe, Va.; Fort Moultrie, S. C.; Fort Oglethorpe, Ga.; Fort Porter, N. Y.; Fort Riley, Kan.; Fort Sam Houston, Tex.; Fort Screven, Ga.; Fort Sheridan, Ill.; Fort Sill, Okla.; Fort Snelling, Minn.; Fort Thomas, Ky.; Vancouver Barracks, Wash.; Walter Reed General Hospital, Takoma Park, D. C.; Fort Wayne, Mich.; Fort William H. Harrison, Mont.

Company C., Hospital Corps, Capt. William A. Wickline, Medical Corps, commanding, is relieved from duty at Fort Niagara, N. Y., and will proceed to the Walter Reed General Hospital, Takoma Park, D. C., for station.

Mills, R. H., dental surgeon, reported for temporary duty at Fort Ethan Allen, Vt.

Hill, Eben C., lieut., left Madison Barracks, N. Y., on 2 months' sick leave of absence.

Graham, George D., dental surgeon, left Fort Crook, Neb., en route to Fort Omaha, Neb., for temporary duty.

Medical Corps of the Navy

Changes for the week ended April 9, 1910:

Richardson, R. R., P. A. surgeon, detached from the Naval Hospital, Portsmouth, N. H., and ordered to the Naval Medical School, Washington, D. C., for instruction.

Asserson, F. A., P. A. surgeon, detached from the Naval Hospital, Boston, and ordered to duty at the Naval Hospital, Portsmouth, N. H.

Shippen L. P., asst.-surgeon, detached from the *Buffalo*, and from duty at Camp Elliott, Panama, Canal Zone, and ordered home; resignation accepted.

Johnson, J. T., acting asst.-surgeon, resignation as Acting Assistant Surgeon, dated July 27, 1909, accepted, to take effect April 18, 1910; detached from the Naval Medical School and ordered home.

Wieber, F. W. F., medical inspector, commissioned Medical Inspector from Dec. 13, 1909.

Bachman, R. A., P. A. surgeon, detached from the *St. Louis* and ordered to duty at the Naval Hospital, Narragansett Bay, R. I.

Jenness, B. F., P. A. surgeon, detached from the *Milwaukee* and ordered to the Naval Recruiting Station, Buffalo, N. Y.

McGuire, L. W., asst.-surgeon, detached from the *Montana* and ordered to the *South Dakota.*

Hermesch, H. R., asst.-surgeon, detached from the *South Dakota* and ordered to the *Montana.*

Changes for the week ended April 16, 1910:

Randall, J. A., P. A. surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to duty at the Naval Hospital, Olongapo, P. I.

Trible, G. B., asst.-surgeon, detached from the *Relief* and ordered home.

Dollard, H. L., asst.-surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to the *Relief.*

Sterne, C. F., asst.-surgeon, detached from the *Washington* and ordered to the *Iris.*

Duhigg, J. T., asst.-surgeon, detached from the *Iris* and from the Pacific Torpedo Fleet, and ordered to Washington, D. C., for examination for promotion.

Valz, E. V., asst.-surgeon, ordered home to wait orders on completion of examination for promotion.

The following officers have been commissioned Assistant-Surgeons: D. C. Walton, J. A. Bass, G. E. Thomas, C. B. Camerer, G. E. Robertson, W. H. Connor, A. B. Davidson, W. L. Irvine, E. W. Phillips, W. A. Bloedorn, A. B. Cecil, I. W. Robbins, H. E. Jenkins, G. R. W. French, S. D. Hart, F. W. Thompson, W. J. Riddick and J. J. A. McMullin.

DuBose, W. R., medical director, April 12, commissioned Medical Director from March 5, 1910.

Public Health and Marine-Hospital Service

Changes for the week ended April 13, 1910:

Brown, B. W., surgeon, granted 4 days' leave of absence from April 4, 1910.

Grubbs, S. B., P. A. surgeon, detailed to attend the annual meeting of the American Medical Association, to be held in St. Louis, June 7-10, 1910. Granted 1 month's leave of absence en route from and return to station.

Lloyd, B. J., P. A. surgeon, granted 7 days' leave of absence from April 6, 1910, under paragraph 191, Service Regulations.

McCoy, George W., P. A. surgeon, detailed to represent the Service at the meetings of the California Public Health Association and the State Medical Society, to be held in Sacramento, Cal., April 18-21, 1910.

Warren, B. S., P. A. surgeon, detailed to attend the meeting of the National Conference of Charities and Corrections, to be held in St. Louis, May 19-26, 1910.

Roberts, Norman, P. A. surgeon, granted 6 days' leave of absence from April 11, 1910, under paragraph 191, Service Regulations. Granted 7 days' leave of absence from April 17, 1910.

Collins, G. L., P. A. surgeon, granted 1 month's leave of absence from April 14, 1910.

Alexander, E., acting asst.-surgeon, granted 30 days' extension of leave on account of sickness from Feb. 26, 1910, and 30 days' annual leave from March 28, 1910.

Bailey, C. A., acting asst.-surgeon, granted 5 days' leave of absence from April 8, 1910.

Foster, S. B., acting asst.-surgeon, granted 15 days' leave of absence from April 15, 1910.

Wetmore, W. O., acting asst.-surgeon, granted 11 days' extension of leave on account of sickness from March 25, 1910.

Board of medical officers convened to meet at the Marine Hospital, Baltimore, for a physical examination of a gunner of the Revenue Cutter Service. Detail for the board: Surgeon W. P. McIntosh, chairman; Assistant Surgeon D. C. Turnipseed, recorder.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arkansas: Regular; Little Rock, May 10-11. Sec., Dr. F. T. Murphy, Brinkley.

Florida: Eclectic; Tampa, May 2. Sec., Dr. Hiram J. Hampton, 1805 Florida Avenue.

Georgia: Regular; Augusta, May 2-3, Atlanta, May 4-7. Sec., Dr. I. H. Goss, 297 Hancock Avenue, Athens. Homeopathic: Atlanta, May 15. Sec., Dr. R. E. Hinman, 153 Whitehall Street.

Louisiana: Regular; New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street. Homeopathic: New Orleans, May 2. Sec., Dr. Gayle Aiken, 1102 St. Charles Avenue.

Massachusetts: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.

Mississippi: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.

Nebraska: State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.

Nevada: Carson City, May 2. Sec., Dr. S. L. Lee.

New York: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

Tennessee: Memphis, Nashville and Knoxville, May 3-4. Sec., Dr. C. A. Abernathy, Pulaski.

Alabama January Report

Dr. W. H. Sanders, chairman of Alabama State Board of Medical Examiners, reports the written examination held at Montgomery, Jan. 11-14, 1910. The number of subjects examined in was 10; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 42, of whom 22 passed and 20 failed. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
[illegible] (1908) 82.3;	(1909)	77.8, 87.1, 82.4
[illegible] College (1908) 79.6;	(1909)	75, 75, 75.1, [illegible]3.
[illegible]	(1905)	81.8
[illegible] Louisiana	(1909)	75.6
Medical College of Ohio	(1908)	76.7
University of Pennsylvania	(1909)	89.3
Vanderbilt University (1901) 80.4;	(1909)	77.8
University of Tennessee (1908) 78.3;	(1909)	75.9
Chattanooga Medical College	(1908)	78
University of Virginia	(1909)	84.1
FAILED		
University of Alabama (1908) 65.2;	(1909)	69.7
Birmingham Medical College	(1909)	71.7
Atlanta College of Physicians and Surgeons	(1909)	68.5, 69.3
Atlanta School of Med. (1906) 67.3; (1907) 65.4;	(1908)	54.4, 69.2
University of Louisville	(1909)	69.4
University of the South (1907) 59.7;	(1908)	48.5
University of Nashville	(1908)	70.1
Chattanooga Med. Coll. (1907) 52.3; (1908) 57.4;	(1909)	70.2
University of Tennessee	(1908)	61.7
Knoxville Medical College	(1908)	48.4
Meharry Medical College (1902) 70.6;	(1908)	71.7

The following questions were asked:

CHEMISTRY

(Answer Eight, no more)

1. What is the difference between analytic and synthetic methods in chemistry? Illustrate each. 2. Explain the reaction which occurs when the aqueous solutions of the two parts of a Seidlitz powder are mixed. 3. Write the equations which show the reaction [illegible] sublimate and potassium iodide in soluti[illegible] 4. What is the essential element of all [illegible]ween hydracids and oxyacids? 5. Give a test for H_2SO_4 when an adulterant in vinegar. 6. Give the technical names of (a) aqua regia, (b) oil of vitriol, (c) green vitriol, and the formula of one of them. 7. What is the chemical composition of ordinary alum? 8. Give the chemical reaction of (a) tears, (b) bile, (c) blood, (d) saliva, (e) milk, and state what salt causes acidity of urine. 9. Give a test for ferrous salts. 10. Explain the difference between a sulphate and a sulphite. Give an example of each. 11. Give tests for albumin and sugar in urine. 12. Describe a chemical test for blood.

ANATOMY

(For Graduates of Less than Five Years' Standing)

1. Describe the upper third of the femur. 2. Give the class of joint, the articulation, and ligaments of the shoulder joint. 3. Trace blood from the heart by way of the subclavian artery to the circle of Willis, naming the arteries uniting to form the circle. 4. Name the muscles of the anterior chest, and give origin and insertion of the largest one of them. 5. Name the main superficial venous trunks of the upper arm, describing one of them. 6. Describe the gall-bladder and bile-ducts. 7. Describe the great sciatic nerve. 8. Describe the rectum.

(For Graduates of More than Five Years)

1. Name the bones of the lower extremity. 2. Name and locate the valves of the heart. 3. Describe in full the sartorious muscle. 4. Locate the spleen and describe its gross anatomy. 5. Describe

in full the pulmonary veins: 6. Describe the contents in Scarpa's triangle and give their relations. 7. Name the lobes and ventricles of the brain. 8. Name the ligaments supporting the uterus and describe its blood supply.

PHYSIOLOGY

1. Explain the functions of the spinal cord. 2. What are the functions of the trifacial or fifth pair of cranial nerves? 3. What is meant by cell action? Give *examples*. 4. What are the supposed functions of the spleen? 5. What are the supposed functions of the thyroid gland? What symptoms sometimes follow its removal? 6. Explain the glycogenic function of the liver. 7. How is the equilibrium of the circulation of the blood maintained in the body? 8. What are the functions of the skin?

ETIOLOGY, PATHOLOGY, SYMPTOMATOLOGY, AND DIAGNOSIS OF DISEASES

1. Give the etiology of cirrhosis of the liver. 2. Give the etiology of *pyelitis*. 3. *Give the pathology* of arterial sclerosis. 4. Give the symptoms and diagnosis of hookworm disease. 5. Give the differential diagnosis between pericarditis and acute pleurisy. 6. Give the pathology of cerebrospinal meningitis. 7. Give the etiology of erysipelas. 8. Give the pathology of pneumonia.

OBSTETRICS AND OBSTETRIC OPERATIONS

1. What is meant by the inclined planes of the pelvis? 2. What are the forces by which the child is expelled? 3. Give operation *for adherent placenta*. 4. Give mechanism of left occipito-posterior position. 5. How would you manage a shoulder presentation? 6. Give causes and treatment of asphyxia in a new-born child. 7. How would you apply forceps at the inferior strait when the occiput has rotated to the pubic symphysis? 8. Give the degrees of perineal laceration and management of each.

GYNECOLOGY

1. Give causes and treatment of hemorrhage of the uterus. 2. Give the cause and treatment of amenorrhea. 3. Define ectopic pregnancy and give varieties. 4. Give differential diagnosis between fluid and solid neoplasms in the abdominal cavity. 5. Under what conditions and why would you prefer vaginal to abdominal hysterectomy? 6. Give symptoms of fibroid tumors of the uterus. 7. Give etiology of retro-displacement of the uterus. 8. Describe the technic of a gynecologic examination.

SURGERY

1. Give *general rules for the treatment of* wounds. 2. Give symptoms and treatment of traumatic spreading gangrene. 3. Give general rules for the treatment of tubercular abscesses. 4. Give differential diagnosis between chancre and chancroid. 5. Give treatment of a compound, comminuted fracture of the femur. 6. Give symptoms and treatment of subcoracoid dislocation of head of humerus. 7. Give symptoms and treatment of stone in the kidney. 8. Give treatment of penetrating gunshot wound of the abdomen.

PHYSICAL DIAGNOSIS

1. In what pathological conditions of the lungs is moderate dulness found; in what is absolute dulness found? 2. Give differential diagnosis between acute bronchitis and lobar pneumonia. 3. What are the principal points of difference between pleuritic friction sounds and bronchial rales? 4. Give the diagnostic signs of aortic aneurism. 5. What are the conditions most favorable for the *production of* metallic tinkle? 6. Give the differential diagnosis between endocarditis and pericarditis. 7. Give the diagnostic symptoms of emphysema *of the lungs*. 8. *Differentiate* between aortic stenosis and mitral insufficiency.

EYE, EAR, NOSE AND THROAT

1. Give symptoms and management of acute catarrhal conjunctivitis: 2. Give the symptoms, dangers, and management of gonorrheal ophthalmia in the adult and in the new-born. 3. Give the *management* of ulcer of the cornea. 4. In what part of the ear does cerumen sometimes become impacted, and how diagnosed and treated? 5. What is *the seat of acute suppurative* otitis media, and what the *symptoms, dangers*, and management? 6. *In the absence* of the special instrument for the purpose how would you arrest an alarming hemorrhage from the nose? 7. What is the most conclusive symptom of diphtheria and how ascertained? What is the most generally accepted treatment? Give in detail the method of administering the treatment, and the dose. 8. Name three instances in which intubation of the larynx would be indicated. Name three in which laryngotomy or laryngo-tracheotomy would be required, and describe the operation.

HYGIENE AND MEDICAL JURISPRUDENCE

1. What is the period of incubation of smallpox? of measles? Give the differential diagnosis between these two diseases. 2. What is immunity? What susceptibility?

3. How is typhoid fever disseminated? Give the hygienic management *of a case*. 4. Describe *briefly* the proper location and construction of a school building. 5. Define malpractice.

6. What are illusions? delusions? 7. Give the differential diagnosis between strychnin poisoning and tetanic convulsions. 8. What are the symptoms of acute poisoning from coal tar derivatives?

Arizona January Report

Dr. Ancil Martin, secretary of the Arizona Board of Medical Examiners, reports the written examination held at Phoenix, Jan. 3-4, 1910. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 5, of whom 3 passed and 2 failed. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
Hahnemann Medical College and Hospital, Chicago	(1906) 76.5; (1907)	75
University Medical College, Kansas City	(1905)	81
FAILED		
University of Louisville	(1909)	68.6, 73.3

Marriages

Aaron Bray, M.D., to Miss Sophia Pollock; both of Philadelphia, April 5.

John Parr, M.D., Methuen, Mass., to Miss Katherine Smith, of Boston, April 5.

Otto Schmidt, M.D., Bethany, Mo., to Miss Dora Mink, of St. Louis, Mo., April 13.

Robert Stevens Page, M.D., Bel Air, Md., to Miss Grace Rogers Street, at Bel Air, April 6.

James T. Jarrett, M.D., Portsmouth, Va., to Miss Anna Andrews, of Roanoke, Va., March 31.

Francis de Sales Dube, M.D., Amasa, Mich., to Miss Estella Isabell Derse, of Milwaukee, recently.

Walter S. Lawrence, M.D., to Miss Merle Mauldin, both of Memphis, Tenn., at Monroe, La., April 5.

Joseph Longworth Nichols, M.D., New York, to Miss May Morgan, at Saranac Lake, N. Y., April 5.

Samuel Henry Hairston, M.D., to Miss Nellie Vaughn Johnson; both of Meridian, Miss., March 16.

Edwin M. Howg, M.D., Petersburg, N. D., to Miss Emma Christine Thorson, of Sisseton, S. D., April 7.

Edgar Harold Willard, M.D., Mount Pleasant, Md., to Miss Mary Louise Gittings, at Knoxville, Md., April 2.

Deaths

Andrew Heermance Smith, M.D. College of Physicians and Surgeons, New York City, 1858; a member of the Medical Society of the State of New York; president of the New York Academy of Medicine in 1903 and 1904; assistant surgeon Forty-third New York Volunteer Infantry during the Civil War, and assistant surgeon in the Army until 1867; a member of the American Climatological Association; physician to the Presbyterian, St. Luke's, St. Mark's and the Woman's Hospital; and since 1895, vice-president of the New York Post-Graduate Medical School and Hospital; died at his home in New York City, April 8, from arteriosclerosis and myocarditis, aged 72. At a special meeting of the Board of Directors of the New York Post-Graduate Medical School and Hospital, April 11, resolutions of affection and esteem were unanimously adopted.

Robert Breckenridge Christian, M.D. University of Virginia, Charlottesville, 1870; a member of the American Medical Association; a charter member of the Arkansas Medical Society; ex-president of the Pulaski County Medical Society, a member of the International Association of Railway Surgeons; secretary of the State Board of Health from 1803 to 1905; from 1898 to 1901, physician to the State School for the Blind; physician to the Arkansas Confederate Home; local surgeon at Little Rock for the Missouri Pacific Railroad from 1882 to 1889; physician in charge of the Pulaski County Hospital in 1891 and 1892, and surgeon of the Little Rock Street Railway and Electric Company from 1892 to 1897; died at his home in Little Rock, April 8, aged 60.

Anson Luman Clark, M.D. Eclectic Medical Institute, Cincinnati, 1861; formerly president of the National Eclectic Medical Association; one of the founders and for 35 years president of, and emeritus professor of obstetrics in Bennett Medical College, Chicago; gynecologist to Bennett Hospital; attending physician and surgeon to Sherman Hospital, Elgin, Ill.; local surgeon to the Chicago, Milwaukee and St. Paul Railway; for 14 years a member and treasurer of the State Board of Health; a member of the Twenty-seventh General Assembly; a member and for five years president of the Board of Education of Elgin; assistant surgeon of the One Hundred and Twenty-seventh Illinois Volunteer Infantry throughout the Civil War; one of the most prominent and esteemed eclectic practitioners of the west; died at his home in Elgin, April 11, from uremia; aged 73.

Edward Champe Carter, M.D. University of Virginia, Charlottesville, 1880; a member of the American Medical Association, Medical Society of the Philippine Islands, Manila Medical Society; and Association of Military Surgeons of the United States; Lieutenant Colonel in the Medical Corps, U. S. Army; chief surgeon at Fort Sheridan, Ill.; formerly instructor in the care of troops and diseases of the chest and sanitation in the Cavalry and Infantry School, Fort Leavenworth, Kan.;

formerly health commissioner of Manila, and a member of Opium Commission; died in the Army and Navy General Hospital, Hot Springs, Ark., April 14, from pneumonia, aged 55.

Richard Gray Herron, M.D. Western Pennsylvania Medical College, Pittsburg, 1889; of Pittsburg; a member of the American Medical Association; chief surgeon of the Pennsylvania Railroad Lines East, and for twenty years surgeon to the company; for several years a member of the staff of the West Penn Hospital, and since 1900 a member of the surgical staff of the Allegheny Hospital; died in that institution, April 9, from dilatation of the heart, aged 44.

Charles B. Mallery, M.D. Albany (N. Y.) Medical College, 1886; a member of the American Medical Association; president of the Aberdeen (S. D.) District Medical Society in 1903, and of the South Dakota State Medical Association in 1905; secretary of the local board of pension examining surgeons; a member of the board of health of Aberdeen; died in St. Luke's Hospital in that city, April 3, from diphtheritic endocarditis, aged 45.

James R. Kewley, M.D. Chicago Medical College, 1876; of Chicago; a member of the American Medical Association and of the Chicago Medical Examiners' Association; oculist and aurist to the People's Hospital; a member of the staff of Mercy Hospital for several years; an Odd Fellow of high rank; died in Eustis, Fla., April 14, from myocarditis, aged 56.

Frank M. Sawyer, M.D. Bennett Medical College, Chicago, 1878; College of Physicians and Surgeons, Chicago, 1884; a member of the American Medical Association; secretary of the board of health of South Bend, Ind., from 1888 to 1890; member of the board of directors of Epworth Hospital; died at his home, April 9, from cerebral hemorrhage, aged 59.

George Louis Horn, M.D. University of Pennsylvania, Philadelphia, 1868; for twenty years an employee of the Baltimore postoffice and superintendent of the money order division; formerly a member of the school board and city council of Baltimore; died at his home in Walbrook, Baltimore, April 8, from heart disease, aged 62.

Samuel Pierpont Ladd, M.D. New York University, New York City, 1879; who was about to be arrested on the charge of having performed a criminal operation, died suddenly in his office in Moosup, Conn., April 6, from the effects of cyanid of potassium, believed to have been self-administered with suicidal intent, aged 61.

John R. King, M.D. Bellevue Hospital Medical College, 1867; a member of the Ohio State Medical Association and Cincinnati Academy of Medicine; for 33 years local surgeon of the Pennsylvania System; and for 43 years a practitioner of Cincinnati; died at his home in Hyde Park, April 10, from heart disease, aged 65.

Thomas Neil McLean, M.D. Yale University, New Haven, 1871; a member of the American Medical Association; one of the founders of and consulting physician to the Elizabeth (N. J.) General Hospital; died in Johns Hopkins Hospital, Baltimore, April 8, from pneumonia, following influenza, aged 67.

Charles Fay Amos, M.D. University of the South, Sewanee, Tenn., 1895; a member of the American Medical Association; surgeon for the Baltimore and Ohio Railroad at various points in West Virginia until 1909, when he moved to Ohio, died at his home in Youngstown, March 21, from pneumonia, aged 39.

Alfred Fowler Rudd, M.D. American Medical College, Eclectic, Cincinnati, 1857; died at his home in Jefferson City, Mont., March 13, from the effects of an incised wound of the throat, supposed to have been self-inflicted with suicidal intent, while despondent on account of the recent death of his wife, aged 77.

Arthur Alvin Holmes, M.D. Harvard Medical School, 1865; a member of the Connecticut State Medical Society; a surgeon in the Federal Service during the Civil War; consulting physician to Bridgeport Hospital; died at his home in Bridgeport, March 24, from pneumonia, following influenza, aged 71.

Charles Schumacher, M.D. University of Göttingen, Germany, 1866; is reported to have died at his ranch twenty miles north of Pasco, Wash., March 30, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent, aged 71.

Clyde Edmund Botkin, M.D. Purdue University, Indianapolis, 1907; formerly a member of the American Medical Association; a member of the Indiana State Medical Association; died at his home in Parker, April 7, from pneumonia, aged 27.

Maurice F. Linquist, M.D. Eclectic Medical College of the City of New York, 1869; a veteran of the Mexican War and a surgeon of volunteers during the Civil War; died at his home in New Haven, April 3, from pneumonia, aged 83.

David P. Lagrone, M.D. Medical College of the State of South Carolina, Charleston, 1861; surgeon in the Confederate Service during the Civil War; died at his home in Johnston, S. C., April 2, from cerebral hemorrhage, aged 77.

John Field Grinstead, M.D. St. Louis College of Physicians and Surgeons, 1889; surgeon for the Wabash Railroad at Keytesville, Mo.; died suddenly at the home of his sister in St. Louis, April 6, from heart disease, aged 45.

Rose Morgan, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1895; a member of the Medical Society of the State of Pennsylvania; died at her home in Williamsport, March 29, from carcinoma of the intestine.

William H. Elliott, M.D. American Medical College, Eclectic, St. Louis, 1878; who conducted a sanitarium for many years at Havana, Ill.; died at his home in Bardolph, Ill., March 24, from carcinoma of the rectum, aged 74.

Haven Palmer, M.D. Medical School of Maine, Brunswick, 1871; a member of the American Medical Association; for 27 years a practitioner of Plymouth, N. H.; died at his home April 8, from nephritis, aged 66.

Charles Bartlett Hammond, M.D. Harvard Medical School, 1880; a member of the American Medical Association, and New Hampshire Surgical Club; died at his home in Nashua, April 8, from uremia, aged 56.

John Milton Hawks, M.D. Physio-Medical College, Cincinnati, 1847; a veteran of the Civil War; and surgeon of the Thirty-third Colored Infantry; died at his home in Hawk's Park, Fla., April 2, aged 73.

Arthur Sylvester McNatt (registration, Eighth Judicial District Board, Texas, 1901); a member of the Hunt County Medical Association; died at his home in Campbell, February 5, from pneumonia, aged 57.

Mary Freeman Coil, M.D. Cooper Medical College, San Francisco, 1882; a member of the Medical Society of the State of California; died at her home in Woodland, Aug. 19, 1909, from arteriosclerosis, aged 58.

Jason Milburn Randall (license, years of practice, Iowa, 1886); of Birmingham; a veteran of the Civil War; died at the home of his daughter in Waterloo, April 3, from organic heart disease, aged 67.

Crawford McWilliams, M.D. College of Physicans and Surgeons, Chicago, 1890; a member of the Iowa State Medical Society; died at his home in Ames, April 2, from pleuropneumonia, aged 44.

John Lafayette Warren, M.D. University of Pennsylvania, Philadelphia, 1856; well-known as a naturalist and sportsman; died at his home in West Chester, Pa., April 8, from pneumonia, aged 72.

Lawrence A. Highland, M.D. University of Buffalo, 1903; of Buffalo, N. Y.; died in the Contagious Diseases Hospital in that city, April 2, from scarlet fever contracted while attending a patient, aged 30.

William A. Davis, M.D. Louisville Medical College, 1904; of Collinsville, Miss.; who was shot in a street duel in Deemer, Miss., March 28, died twenty hours later at Oktibbeha, Kemper county, aged 34.

Return J. Pope, M.D. Washington University, St. Louis, 1871; a member of the State Medical Association of Texas; died suddenly at his home in Sweetwater, April 6, from heart disease, aged 65.

Samuel E. Sanderson, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1876; a pioneer practitioner of Minneota, Minn.; died in Madison, Wis., February 5, from nephritis, aged 59.

Clarence Duane Heflin, M.D. Keokuk, Iowa, Medical College, 1895; formerly of St. Joseph, Mo.; died in St. Francis Hospital, Kewanee, Ill., March 29, from pernicious anemia, aged 41.

Arthur James Darrah, M.D. University of Vermont, Burlington, 1867; a member of the Vermont State Medical Society; died at his home in Enosburg Falls, April 3, from influenza, aged 65.

Clarence Godfrey Vary, M.D. Jefferson Medical College, 1898; a member of the Michigan State Medical Society; died at his home in Battle Creek, April 7, from nephritis, aged 36.

Frederick E. Green (Registration, Thirteenth Judicial District Board, Texas, 1898); died in his apartment in Hutchins, April 9, from the effects of an overdose of chloroform.

Thomas G. McClellan, M.D. Memphis, 185—; of Dallas, Texas; for several years treasurer of Fayette county; died at the home of his grandson, Aug. 18, 1909, aged 84.

William T. Coffman, M.D. Central Medical College, of St. Joseph, Mo., 1902; died at his home in Unadilla, Neb., April 23, 1909, from intestinal obstruction, aged 45.

Joel Thomas Bell, M.D. University of Nashville, Tenn., 1858; died at the home of his daughter in Guthrie, Ky., March 30, from pneumonia following influenza, aged 78.

Henry Clay Cress, M.D. Jenner Medical College, Chicago, 1901; of Chicago; died in Provident Hospital in that city, Nov. 15, 1909, from pneumonia, aged 34.

John B. Crowley, M.D. Philadelphia College of Medicine and Surgery, 1858; for forty-five years a practitioner of Sullivan, Ind.; died at his home, April 7, aged 84.

George Francis Haynes, M.D. Eclectic Medical Institute, Cincinnati, 1872; died at his home in Chicago, January 2, from cerebral hemorrhage, aged 73.

John H. Elrick, M.D. Jefferson Medical College, Philadelphia, 1858; died at his home in Harrisville, Pa., January 24, from capillary bronchitis, aged 80.

Frederick William Scheid, M.D. Pulte Medical College, Cincinnati, 1881; died suddenly at his home in Toledo, April 7, from heart disease, aged 50.

Joseph P. McNutt, M.D. Medical College of Virginia, Richmond, 1870; died at his home in Princeton, W. Va., April 5, from acute gastritis.

James B. Cowan, M.D. University of Nashville, Tenn., 1878; died at his home in Lebanon, Tenn., Oct. 3, 1909, from angina pectoris, aged 52.

Robert E. McLelland (state certificate, Texas, 1904); died in his room in Houston, Texas, March 19, from tuberculosis, aged 45.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

THE PUBLIC PRESS AND THE PUBLIC SCHOOLS AS FACTORS IN THE ANTITUBERCULOSIS EDUCATIONAL CAMPAIGN

By M. T. Field, M.D.

SALEM, MASS.

So much has been written and said concerning public instruction on tuberculosis that there seems to be little excuse for any further literature on the subject. Many of the antituberculosis educational methods adopted by boards of health and special societies, are excellent and far-reaching in the good results produced. On the other hand, some of them, while perhaps ingenious, are not very effective, either because they influence only a relatively small number of people or because they influence them only in an unimpressive manner.

Two agencies that are within the reach of all health authorities have not been employed as frequently as they should—the public press and the public schools. These two agencies present almost unlimited opportunities for distributing antituberculosis information among the people. The "dosage" can be made as large or as small as is desired, and can be repeated as often as necessary. In this way, practically all the people can be reached in a very short time, with only a small expenditure of money.

The purpose of this paper is to describe a plan adopted by the Salem Board of Health during the year 1909 which employed, in a thorough manner, the public press and the public schools, in its antituberculosis educational campaign. Early in the year, illustrated circulars were printed and distributed throughout the city, in the factories, stores, etc. These folders touched on important features of the disease and called attention to the fact that antituberculosis articles were to be published daily in the local papers by the board of health. Every one was advised to read them. These articles were printed as ordinary news in a prominent part of the paper and in the same place each day, and were inserted with ordinary large type headings. They were made as readable as possible. Considerable attention being paid to conditions as they existed in Salem. Much stress was laid on the importance of early treatment, and the great care that should be used to avoid infection, particularly when there was more or less exposure to the disease in the same household. The articles continued every day for nearly a month. They were then followed by a "question box department," which the board of health opened in the papers. In these columns suitable questions were answered daily. Many of these questions touched on features that were difficult to deal with in the regular articles. Judging from the various encouraging reports that came to us from time to time, we are firmly convinced that the newspaper publicity was productive of much good, and there was no evidence of any phthisiophobia resulting from it.

Our attention was next directed to public school instruction. The board of health prepared a well-illustrated pamphlet of about 75 pages entitled, "The Story of Tuberculosis, Man's Greatest Enemy," expressly for the use of school children. We tried to make this as readable as possible, at the same time treating of all the essential features of tuberculosis. Every effort was made not to arouse undue morbidity. Permission was obtained from the school board and church authorities to introduce this publication as a text-book, into the seventh, eighth and ninth grades of the grammar schools and into the high and parochial schools; much interest was manifested by both teachers and pupils.

The text-books were distributed with the understanding that at the end of the course of study, each child would be required to answer, in writing, a set of questions submitted by the board of health. This was done in order to promote more diligent study and also to enable us to judge how well the children grasped the subject. Children were also advised to take the pamphlets home and encourage other members of the household to read them.

The method of teaching adopted in the schools was as follows: In the grammar grades, this study was taken up every day during the reading hour. The portion of the book to be read was designated by the "reading teachers," who explained the things that were difficult to understand and encouraged and assisted the pupils in many ways. This continued for about three weeks. At the end of this time, each child was required to answer the board of health questions in writing, and was urged to use his own words as much as possible. The pupils of some of the schools were required to answer the questions in writing, first at home in conjunction with other members of the family and after this, a memory examination was held in school, the pupils answering ten questions each day for three consecutive days. In the high school the study was introduced into the literature class. The pastor in charge of one of the parochial schools gave several cash prizes for the best papers written by the children of his school.

The following is the list of examination questions answered in writing by over 3,000 school children. (The population of Salem is 39,000.)

1. What is tuberculosis?
2. Describe briefly its cause.
3. What is consumption?
4. What are the three common ways for the germs of tuberculosis to enter the body?
5. Is tuberculosis inherited?
6. What is meant by "predisposition?"
7. Is it possible to prevent tuberculosis?
8. How may this be done?
9. Why is it important to take care of all sputum, especially consumptives' sputum?
10. Describe the proper methods of disposal of consumptives' sputum.
11. What is the significance of "open" and "closed" tuberculosis?
12. Why is consumption called a house disease?
13. How can the home be made sanitary?
14. What are the evil results of house dust, dampness and improper ventilation?
15. Why are bare floors and rugs more hygienic than fixed carpets?
16. What is the value of regulated bathing?
17. Why do drunkenness and other bad habits frequently lead to tuberculosis?
18. Describe briefly the essential features in the treatment of tuberculosis.
19. Why should a love of outdoor life be cultivated?
20. Are advertised "cures" of any value?
21. How curable is tuberculosis?
22. Why is it desirable to obtain treatment early?
23. Why should very sick patients not be advised to seek a change of climate?

24. What are some of the advantages and disadvantages of home treatment?
25. How can it be made safe to live in the same household with a consumptive patient?
26. What is the value of soap as a disinfectant?
27. Why is sanitarium treatment so successful?
28. What useful purpose do day and night camps and open air schools serve?
29. Is it possible to prevent the occurrence of one case of consumption after another in the same family?
30. How can this be prevented?

These questions were answered by pupils from 11 to 18 years of age. It was not our intention at first to include the younger children, but we were urged to do so by some of the teachers. The results proved their contention that the subject was within the understanding of children even 11 or 12 years of age.

The majority of the papers were extremely good. Any one given the opportunity to glance over them would at once be convinced that the subject matter was well understood. Some of these papers are to be published in the local press. It is the intention of the board of health to have the teaching of this subject, followed by examinations, repeated once a year.

As a result of this year's work, we feel justified in drawing the following conclusions:

1. Tuberculosis as a study can be introduced into the public schools without conflicting in any way with the other school work and without creating morbidness among the pupils.
2. Even young children 11 or 12 years of age can, with proper assistance, master the essential features of the subject.
3. A very powerful educational influence can be exerted by children thus instructed in their own houses and elsewhere.
4. The method of teaching which compels the pupil to study the subject carefully in order to answer correctly the examination questions is, in our opinion, better than any other plan we know of—such as occasional lectures by physicians.
5. If this method of antituberculosis instruction could be adopted in every city and town throughout the country, year after year, it would mean that every future man and woman—every father and mother educated in this country, would have received a good antituberculosis education which almost unconsciously would lead to a more sanitary way of living, resulting in benefit in many ways, and protecting not alone against tuberculosis but against other diseases as well.

We believe that it would be an excellent plan for state medical societies or the state boards of health to take charge of the antituberculosis education of school children, sending out examination questions from time to time in this subject, just as the Board of Regents in New York state does now on other subjects. In this way, general interest would be aroused that could not possibly be produced in any other way and much benefit would result therefrom.

A National Department of Health

From all reports it is evident that there is a general and widespread approval on the part of the medical profession of the country for the measure to create a national Department of Health. Resolutions have already been passed favoring a department by the following county societies: Adams county, Ill.; Lee county, Ill.; Tazewell county, Ill.; Mercer county, Ky.; Merrimack county, N. H.; New Orleans Parish, La.; Sebastian county, Ark.; Montgomery county, Ark.; Pulaski county, Ill.; Daviess county, Mo.; Washington county, Tenn.; Washington county, Iowa; Washington county, Ark.; Fourth District Society, S. D.; Madison county, Ala.; Alameda county, Cal. The Commercial Club of North Platte, Neb.; the Florida Press Association; and the Hobart, Okla., Chamber of Commerce have also taken action.

Editorial comments show that the movement has the endorsement of the public press. Extracts from a few of the editorials received follow:

The *Wilkes-Barre* (Pa.) *Record* says, April 11, "Congress has before it a bill providing for the consolidation of the various health agencies into a federal bureau. The movement has been endorsed by the national platforms of the two great parties and by President Taft. A dispatch from Washington states 'it is appreciated that there is little or no hope of action at this session.' It is impossible to see why there should be further delay. The proposition is not revolutionary. It merely provides that various agencies already established shall be brought under one management, in order that there may be a concerted and harmonious fight against disease so far as it lies in the power of the federal government to pursue that work. . . . Science has pointed out the way to the rescue. The public demand for it has been created. There is absolutely no reason why congress should longer defer the enactment of a measure advocated by the national and state medical associations, the party platforms, the President and the best thought of the nation."

The *St. Paul* (Minn.) *Pioneer-Press* says, "Senator Owen of Oklahoma in a speech supporting his bill to provide for a Department of Health . . . presented to the Senate some statistics that should make the people of the country think. . . . Even if the conditions are only a small part of what he says and if only a minor fraction of what he claims could be accomplished, a Department of Health would be worth while. Let us conserve lives and health of the people along with our other resources, for these are our greatest resource."

The *Chicago Examiner* says: "Senator Owen's bill, providing for the establishment of a national Department of Health, should speedily become a law. . . . If there be any subject of government that is essentially interstate and that requires uniform, nation-wide control it is disease. Microbes pay no attention to political divisions—they have no regard for state lines. . . . Disease germs are so furtive and insinuating that to deal with them effectively requires that they shall be attacked wherever and whenever found. A sanitary campaign in New York will often be the best possible protection for Illinois. . . . Senator Owen's bill has no shadow of despotism in it. By its terms all federal officials whose duties relate to 'the medical, surgical, biologic or sanitary service or any question relative thereto' (excepting the departments of the War and the Navy) are integrated in the proposed Department of Health. . . . A large corps of attentive and capable students and observers scattered throughout the country, and all coordinating their work in one intelligent system, cannot fail to accomplish much good. What the Weather Bureau is to storms the proposed department would be to disease—and something more. The bill ought to pass!"

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—Second Weekly Meeting

DISEASES OF NASAL SEPTUM

DEVIATIONS: Etiology, pathology, operative treatment.
PERFORATION OF NASAL SEPTUM: Etiology, treatment.
INJURIES OF NOSE: Pathology, diagnosis, treatment.

DISEASES OF THE ACCESSORY SINUSES OF THE NOSE

INFLAMMATION OF THE ANTRUM OF HIGHMORE: Etiology, diagnosis, treatment.
INFLAMMATION OF THE FRONTAL SINUS: Varieties, etiology, symptoms, treatment.
INFLAMMATION OF THE ETHMOID CELLS: Pathology, symptoms, treatment.
EMPYEMA OF THE SPHENOIDAL CELLS: Symptoms, treatment.

DISEASES OF THE NASOPHARYNX

POSTNASAL CATARRH: Adenoids. Hypertrophy of pharyngeal tonsil. Symptoms. treatment. Chronic bursitis.

DISEASES OF THE OROPHARYNX

ACUTE PHARYNGITIS: Diagnosis, treatment.
SIMPLE CHRONIC PHARYNGITIS: Etiology, diagnosis.
CHRONIC FOLLICULAR PHARYNGITIS: Symptoms, treatment.
ATROPHIC PHARYNGITIS.
ULCERATIVE PHARYNGITIS.
PHLEGMONOUS PHARYNGITIS.
RETROPHARYNGEAL ABSCESS.

been ten years in storage, and the poisonous qualities have been changed so as to render the liquor comparatively harmless. Beer should not be sold until it has been stored for 6 months. High-grade liquors properly made and aged lose much of their poisonous qualities.

12. **Antidote for Milk-Sickness.**—According to Mosley, the substance contained in white snakeroot that causes milk-sickness is aluminum phosphate. Bicarbonate of soda is an antidote to the poison. The poisoning seems to be due to an acidosis produced in the blood; hence the bicarbonate of soda, by increasing the alkalinity of the blood, counteracts its effects. If given with a vegetable diet the poison is harmless, but with animal food its effects are poisonous.

The Boston Medical and Surgical Journal

April 7

15 *Chronic Primary *Intussusception in the Adult. H. W. Goodall,* Boston.
16 *Psychic and Somatic Factors in Patient with Acute Delirium Dying of Septicemia: Experimental Guinea-Pig Infection with *Staphylococcus Albus.* E. E. Southard and J. G. Fitzgerald, Toronto.
17 Uterine Constriction Bands Complicating Labor. J. C. Hubbard, Boston.
18 Pain Relieved by Manual Therapy. E. C. Thompson, Boston.

15. **Chronic Primary Intussusception.**—Goodall's analysis is based on a study of 122 cases, 1 of which occurred in his practice, 4 were taken from the records of the Massachusetts General Hospital, and 117 were collected from the literature. The following points are emphasized:

1. Chronic primary invagination in the adult is probably not so infrequent as might be supposed, since in the great majority of the reported cases the true nature of the disease has been unsuspected throughout its course, the diagnosis being made at the time of operation or post-mortem examination.
2. This failure to diagnose is in many of the cases to be explained by unfamiliarity with the symptomatology, since the clinical picture has often been typical enough to at least suggest the nature of the disease.
3. The disease, if allowed to run its natural course, is usually fatal, whereas with proper surgical treatment, especially if an early diagnosis is made, the mortality should be low.
4. The disease often simulates some grave abdominal condition such as tuberculosis or carcinoma in which a most unfavorable prognosis is given and operation deemed inadvisable, emphasizing the importance of excluding chronic invagination in all obscure diseases of the abdomen.

16. **Psychic and Somatic Factors in Acute Delirium.**—A well-educated negress, with probably some hereditary tendency to insanity, marries at 28 an impotent husband of 60. Six and one-half years later she develops nervousness and insomnia, together with headaches and constipation, which the subsequent history indicates are probably due to the growth of fibromyomata of the uterus. Meantime the patient complains at times of sexual dissatisfactions. The uterine growth, which only later was certainly diagnosed as fibromyomatous, becomes palpable 15 months after the initial train of symptoms had set in. Whether the eroticism which accompanied the other symptoms is at all conceivably due to impulses from the uterine region is doubtful. Operation is refused.

Acute insanity of delirious type develops, and the only physical symptoms then of note are acne and a slight swelling of the legs (observable by family physician, but not noted by examining physicians unfamiliar with patient). Following the somatic symptoms, it appears that a marked swelling of the left leg, with fulness and tenderness of the popliteal space, was first noted in hospital 15 days after onset, accompanied by a temperature of 101 F. The swelling subsided to some degree later, so that it became difficult to say that one leg was larger than the other. It is hard to say at what time the iliac vein thrombi began to develop. Possibly the swelling of both legs, noted in the acute outburst, was due to pressure on the veins by the fibromyomata rather than to the growth of thrombi within the veins. Also it is impossible to say when the septicemia began. Whether the septicemia developed prior to the acute outburst or 15 days later, it remains certain that in the first 15 days of the insanity there was evidence of an important somatic disease (massive fibromyomata exerting pressure on the iliac veins), the results of which became later inextricably mingled with the mental symptoms.

The Lancet-Clinic, Cincinnati

April 9

19 Sexual Impotence in the Mal[illegible] iati.
20 Arthritis Deformans. J. V. [illegible]
21 Case of Dermatitis Venenata. [illegible] nati.

Virginia Medical Semi-Monthly, Richmond

March 25

22 The Physiology of the Adrenals in Relation to Poisoning by Adrenal Preparations. C. E. deM. Sajous, Philadelphia.
23 Intracapsular Fracture of Hip: Prognosis. J. N. Upshur, Richmond.
24 Headache. G. L. Servoss, Fairview, Nev.
25 Surgical Drainage. L. Sexton, New Orleans.
26 Causes and Treatment of Rheumatic Fever. W. S. Gordon, Richmond.
27 Regurgitation from the Bladder to the Kidney During Ureteral Catheterization. F. R. Hagner, Washington, D. C.
28 Manic-Depressive Insanity. D. P. Hinckling, Washington, D. C.
29 Acute Nephritis Following Severe Tonsillitis. O. Marshall, Brandy Station.

The Northwestern Lancet, Minneapolis

March 15

30 *The Contagiousness of Poliomyelitis. H. W. Hill, Minneapolis.
31 Spinal Anesthesia. F. R. Wright, Minneapolis.
32 Diseases of the Stomach and Their Treatment. H. L. Knight, Minneapolis.
33 *Diverticula of the Sigmoid. A. W. Abbott, Minneapolis.
34 Prevention of Appendicitis. A. Kuhlmann, Melrose, Minn.
35 An International Commission on the Control of Tuberculosis of Domestic Animals. M. H. Reynolds, St. Paul.

30. **Contagiousness of Poliomyelitis.**—Hill has tabulated 81 cases, occurring in 69 families. These figures show that the highest number of cases at any one age is 19 at 2 years old (from 1½ to 2½ years); i. e., about 23 per cent. of all cases were at or about 2 years old; 73 per cent. of all children of this age in the affected families were attacked. The group age-incidence is most marked at 1 to 3 years (1 and over to 3½ years). About 53 per cent. occurred in this group; 66 per cent. of all the children of this age group in the affected families were attacked. The sex-incidence is 46 males and 45 females (certain cases available for this calculation, in addition to those suitable for other calculations, being added in). Whether or not the sex-incidence at different ages is different could hardly be determined from these scanty figures. There seemed to be no relation to nationality. The nationalities predominating in each community, judging from the general information obtainable, naturally suffered most. Exact figures showing the nationality distribution of the different communities were not available. Eight of the 69 families showed secondary cases; 4 of these families showed 1 secondary case each, and 4 showed 2 secondary cases each.

33. **Diverticula of Sigmoid.**—In Abbott's case the cause of the diverticulum was a stricture. The formation of fecal stones proximal to that stricture followed by which the ordinary fecal contents had passed naturally and for a long time, and that the stones had simply buried themselves in the wall of the gut. That the stones were formed before the diverticula was rendered almost certain from the fact that there were still several lying free in the lumen of the gut of the same size and hardness as those in the diverticula.

Journal Tennessee State Medical Association, Nashville

March

36 The Correction of Uterine Displacements. C. N. Cowden, Nashville.
37 Woman in the Field of Medicine. D. L. Wilder, Knoxville.
38 Diagnosis and Treatment of Amebic Ulceration of the Large Intestine. A. B. Cooke, Nashville.
39 Intussusception in Children. J. Overton, Nashville.

Journal Medical Society of New Jersey, Orange

April

40 Edema. W. L. Pyle, Jersey City.
41 Summer Grip. J. Douglas, Morristown.
42 The More Common Affections of the Nose and Throat: Diagnosis and Treatment. G. H. Cocks, New York.
43 Urethral Stricture. C. L. de Meritt, West Hoboken.
44 *Health Education of the Juvenile Public. W. H. Shipps, Bordentown.
45 *Sarcoma of the Uterus in a Child: Operation: Recovery. W. D. Miningham, Newark.

44. **Health Education of Juvenile Public.**—It is held by Shipps to be the duty of every parent and guardian to

instruct the child in Nature's laws so far as they concern his physical welfare, at as early a date as the child is capable of grasping such information, and no false sentimentalism should seek to keep from the child that knowledge of his physical being which he has a perfect right to demand. Were this course more universally adopted, he believes much suffering and misery would be averted and the labors of the sanitarium appreciably lightened. A proper course to pursue is to aid in the organization of societies, whose aim should be to contribute largely to the creation of a sentiment in favor of this work on the part of the general public, which, if accomplished, will unodubtedly aid materially in gaining the results anticipated. In addition to the methods referred to, the health culture of the young can also be largely facilitated by other resources, such as local boards of health, boards of education, medical school inspectors, health officers and representatives of the medical profession, all of whom should recognize the opportunities they hold of imparting to the young such knowledge as it is unquestionably their duty to give careful attention to.

45. **Sarcoma of the Uterus in a Child.**—A case of primary sarcoma of the uterus in a child of 12 is reported by Miningham. The tumor was of a small, spindle-cell variety, and presented many areas of gangrene. With the exception of an attack of scarlet fever at 5 years, the patient had always been well. Menstruation had never been established. In December, 1908, a bloody flow from the uterus occurred, which continued uninterruptedly for three weeks. It was attributed to menstruation and no examination was made. The girl was never well afterward; a gradual loss of weight and strength set in, growing progressively worse. Slight pain and discomfort in the pelvic region were often complained of. Irregular hemorrhages occurred frequently until Oct. 15, 1909, since which time the flow had been more or less constant. Drugs and tampons were of service now and then, but during the latter part of her illness were entirely ineffective. The curette simply aggravated the condition. Septic absorption from the gangrenous mass added considerably to her misery. The temperature curve was of the true septic type.

The diagnosis of sarcoma was made, and although a distinctly bad surgical risk, Dr. Ill urged an operation as offering the only chance. Examination showed a large, freely movable tumor extending to the umbilicus and occupying the entire pelvis. At the cervix there presented a friable polypoid mass which bled on the slightest manipulation. The combined vaginal and abdominal operation was performed, removing uterus, tubes and ovaries. Improvement set in immediately and continued uninterruptedly.

Journal of the South Carolina Medical Association, Florence

February

46 Pneumonia. O. B. Mayer, Newberry.
47 Treatment of Pneumonia. S. L. Swygert, Greenwood.
48 Congenital Dislocation of the Hip. A. R. Taft, Charleston.
49 Factors which Govern Drug Action. G. E. Thompson, Easley.
50 Dysmenorrhea. J. H. Teague, Laurens.
51 Uncinariasis. O. W. Nettles, Spartanburg.
52 The Family Physician. S. G. Dixon, Philadelphia.

Bulletin of the Lying-in Hospital of the City of New York

September, 1909

53 *Rupture of the Uterus During Labor. R. W. Lobenstine, New York.
54 *The Results and Technic of the Lying-in-Hospital Out-Patient Service in 45,000 Confinements. J. A. Harrar, New York.
55 Constipation as Treated in the Babies' Class. E. L. Coolidge, New York.
56 *The Hour of Birth. C. B. Knapp, New York.
57 *Avulsion of the Puerperal Uterus Following Inversion. J. A. Harrar, New York.
58 *Incarceration of the Pregnant Uterus. R. W. Lobenstine, New York.

53. Abstracted in THE JOURNAL, Oct. 9, 1909, p. 1218, and published in the *American Journal of Obstetrics* for November, 1909.

54. **Results at Lying-in Hospital.**—This series of cases occurred during the last 14 years, and the mortality among the mothers was found to be 0.32 per cent. (144 cases), which is 1 death to about every 300 deliveries. This includes all patients transferred during labor or afterward to the Lying-in Hospital or other hospitals and subsequently dying in the wards; 99 died in the tenements and 45 in the hospital wards after admission from the tenement service. The chief causes of death were sepsis, rupture of the uterus, eclampsia and placenta prævia, in the order named; 36 women, or 1 in 1,250 (.008 per cent.) succumbed to septic infection. Harrar attributes the frequency of this condition not only to the patient's surroundings, but also to the practice of employing midwives, who are both dirty and incompetent. Twenty women died as the result of rupture of the uterus. In 9 the rupture was discovered after performance of an internal podalic version and the accident was ascribed to the operation. There were 6 cases of spontaneous rupture in prolonged labors; in 1 the cervix had been amputated a year previously and the rupture was produced during a high forcep delivery; 1 followed injury from a fall and 1 occurred in the scar from a formal Cesarean operation. Placenta prævia ranked fourth on the list as a mortality factor, there having been 16 deaths from this condition. The remaining deaths were due to pneumonia (8 cases); cardiac diseases (6 cases); premature detachment of the placenta (4 cases); postpartum hemorrhages (4 cases); and pulmonary phthisis (5 cases); 4 deaths were ascribed to uremia and 1 to shock; 5 women died after the Cesarean section had been performed. A number of other causes of deaths are mentioned which claimed 1 or 2 patients each, and make up the remaining number.

Harrar claims that as one-quarter of the total mortality was due to sepsis, which is a preventable cause, that a possible future reduction in these figures may be hoped for. An analysis of the deaths from this cause show that in succeeding groups of 10,000 cases each, a marked reduction has taken place in the later ones. He describes the method in which surgical cleanliness on the part of the patient and the attendant is secured and as the results of which the improvement has taken place.

56. **Hour of Birth.**—Knapp presents certain conclusions regarding the hour of birth which he bases on a series of about 39,000 cases. He found in this series that the largest number of births took place during the hour from 11 p. m. to midnight, while the smallest number occurred during the hour from 6 to 7 p. m. As the length of the average labor is twelve hours' duration, it would appear that in the majority of cases this process begins between the hours of 10 a. m. and 10 p. m. Knapp believes that the activities of the day furnish the exciting cause in the production of labor and the tendency to start the same is greater during the day time because of the patient's muscular exertions connected with her ordinary movements.

57. **Avulsion of the Puerperal Uterus.**—Harrar reports a case of complete avulsion of the puerperal uterus following version, in a young woman of 24, in her fourth pregnancy. She gave a history of a beginning miscarriage for which a doctor was called in, who extracted the fetus after only partially dilating the cervix. In extracting the placenta, which was firmly adherent, he inverted the uterus. He diagnosed this condition as a large polyp, which he proceeded to remove by twisting it off. He succeeded, but the woman bled profusely and went into collapse. After packing the vagina with cotton, he sent the patient to the hospital. On examination after admission, the bladder was found to be intact, although the serous coat was torn, and a portion of the broad ligament with the ovary attached was hanging down in the vagina. This was removed, the area cleansed as well as possible and the cavity packed with iodoform gauze. The patient made almost an uneventful recovery, without any evidence of septic infection.

58. Published in the *American Journal of Obstetrics and Diseases of Women and Children*, December, 1909.

Colorado Medicine, Denver

March

59 Surgical Typhoid Infections of the Hepatic Organs. E. G. Edwards, La Junta.
60 An Avoidable Form of Infant Starvation. H. B. Whitney, Denver.
61 Surgery in the Tuberculous. D. P. Mayhew, Colorado Springs.
62 The Use of Tuberculin in Pulmonary Tuberculosis. W. T. Little, Canon City.
63 A Pharmacologic Study of the Drugs used in Diseases of the Genitourinary Tract. W. A. Jolley, Boulder.

Journal Indiana State Medical Association, Fort Wayne

March

64 *Unusual Injuries in the Region of the Shoulder-Joint. P. F. Martin, Indianapolis.
65 The Home Treatment of Tuberculosis. J. C. Blossom, Richmond.
66 The Medical History of Indiana (continued). G. W. H. Kemper, Muncie.
67 Congenital Heart Disease. L. T. Rawles, Huntertown.

64. **Unusual Injuries of Shoulder-Joint.**—Martin has found that fracture dislocations of the upper end of the humerus are of greater frequency than is generally believed; the condition is often not recognized. In all cases of dislocation of the humerus, an attempt at reduction by gentle manipulation under anesthesia having failed, he advises that open arthrotomy should be done at once. Immediate open arthrotomy, under favorable circumstances, should be practiced in all cases of known fracture dislocations of the upper end of the humerus. There should be no old unreduced dislocations. Radiography should be employed in connection with a thorough, properly painstaking physical examination, and not as a substitute, conclusive diagnosis depending on the clinical manifestations as the keynote and the radiogram as correlative evidence.

Ohio State Medical Journal, Columbus

March

68 The X-Ray Examination of the Stomach. S. Lange, Cincinnati.
69 The Remote Effects of Shock and Concussion. F. Warner, Columbus.
70 The Professional Anesthetist. E. Metzenbaum, Cleveland.
71 Practical Treatment of Hemorrhoids. W. Teachnor, Columbus.
72 Phases of Automatism in Epilepsy. W. H. Pritchard, Gallipolis.
73 Thoughts on Dermatology. D. Moury, Bellefontaine.
74 Advantages of the Submucous Incision for the Reduction of Hypertrophied Turbinals. C. P. Linhart, Columbus.

Southern Medical Journal, Nashville

March

75 *Two Apparently New Physical Signs, Whereby Normal Organs may be Outlined and Diseased Conditions Diagnosticated, Particularly Within the Chest, by Means of Palpation. F. M. Pottenger, Monrovia, Cal.
76 *The Cancer Problem. R. Park, Buffalo.
77 Goiter. F. T. Meriwether, Asheville, N. C.
78 Pulmonary Tuberculosis—Its Care and Treatment. C. A. Robertson, Nashville.
79 Erysipelas. C. F. Anderson, Nashville.
80 *Ureterocystostomy—An Improved Technic—Case of Double Ureteral Implantation into the Bladder. J. W. Long, Greensboro, N. C.
81 Hematogenous Kidney Infections. A. F. Toole, Birmingham, Ala.

75. Published in the *Interstate Medical Journal*, December, 1909, *Southern California Practitioner*, December, 1909, and the *Lancet-Clinic*, Dec. 11, 1909.

76. Abstracted in The Journal, Jan. 15, 1910, p. 231.

80. **Ureterocystostomy.**—The method which Long regards as the simplest, and therefore the best, of doing an intra-abdominal ureterocystostomy is as follows: Make an incision of convenient length into the posterior wall of the bladder near its base. It is just as easy to sew up an incision one or two inches long, as it is to sew a half-inch incision, and, in fact, according to his experience, it is much easier. Besides, it gives one an opportunity of stitching the end of the ureter to the mucosa of the bladder and thereby do away with traction sutures. Long therefore makes an incision long enough so that he can work conveniently and quickly. The end of the ureter, cut tapering, is then introduced into the bladder a sufficient distance to be easily sutured by two fine catgut sutures to the mucosa a little way from the incision. The incision is then closed, and the intraperitoneal exposed portion of the ureter covered. The method was employed successfully in a case of carcinoma of the cervix uteri.

Chicago Medical Recorder

March

82 The Press in its Relation to Legislation for the Improvement of Charitable Institutions and Medical Reforms. F. Billings, Chicago.
83 The Press as a Public Educator in Medicine. W. Hutchinson, New York.
84 What May the Medical Profession Expect from the Press? S. Mathews, Chicago.
85 The Relation of the Press and Physicians to Departments of Health. W. A. Evans, Chicago.
86 Intra-oral Surgical Operations. T. W. Brophy, Chicago.

Yale Medical Journal, New Haven

March

87 *[illegible] C. J. Bartlett, New Haven.
88 [illegible] from the Inhalation of Castor Pomace. [illegible] Haven, Conn.
89 [illegible] Microtome Stage. W. E. Rounseville, Hartford, Conn.

87. **Osteitis Deformans.**—Bartlett reports a case showing gross involvement of the skull only (hyperostosis cranii). It appears to be unique among those reported that have come to autopsy, in that, although during life there was no evidence of the involvement of the long bones, microscopic examination of a portion of the femur removed at autopsy showed the early stage of such involvement. Also the condition of the pituitary gland found here is of interest from the etiologic standpoint. The enlargement of the head was in all diameters, but was most marked in the temporal regions, causing the upper parts of the ears to project prominently from the head. The measurements of the skull were: occipitofrontal circumference over glabella, 66 cm.; from glabella to inion along sagittal suture, 38 cm.; diameter from glabella to most posterior part of the head, 21.2 cm.; bitemporal diameter, 19.5 cm.

The anatomic diagnosis was diffuse hypertrophy and rarefaction of skull; enlarged pituitary gland; backward displacement of manubrium; moderate mitral stenosis with some replacement fibrosis of heart; beginning fatty degeneration of aorta and coronary arteries; bronchopneumonia with emphysema, edema, and chronic congestion of lungs; atrophy of gastric mucosa; chronic diffuse nephritis; bone marrow, red; and general muscular atrophy. From the autopsy findings it appears that the hypertrophy of the skull was almost entirely on its outer surface. Its cavity had not been encroached on by the thickened bone.

Journal Oklahoma State Medical Society, Muskogee

March

90 The Surgical [illegible] A. L. Blesh and C. E. Lee, [illegible]
91 Animal Heat. [illegible]
92 The Social Ev[illegible]
93 [illegible] City.
94 [illegible] utler, Tulsa.
95 [illegible] of the Round Ligaments. W. E. [illegible]

Journal of the Kansas Medical Society, Kansas City

March

96 Laboratory Methods Accessible to the Clinician. E. H. Schorer, Lawrence.
97 Muscular Atrophy. W. W. Yates, Topeka.

Surgery, Gynecology and Obstetrics, Chicago

March

98 *Gastrojejunal Ulcers (Pseudojejunal Ulcers). W. J. Mayo, Rochester, Minn.
99 *Excision of the Fat of the Abdominal Wall—Lipectomy. H. A. Kelly, Baltimore.
100 *Inflammatory Tumors of the Sigmoid. M. A. Myer, St. Louis.
101 Circumscribed Serous Meningitis of the Cord. J. C. Munro, Boston.
102 Pregnancy and Labor Complicated by Nervous Over-Development. F. S. Newell, Boston, Mass.
103 *Frequency of Congenital Sacs in Oblique Inguinal Hernia. W. Hessert, Chicago.
104 A New Operation for Arthritis Deformans and Certain other Deforming Affections of the Hip. F. H. Albee, New York City.
105 The Ferment and Antiferment Treatment of Suppurative Processes. E. Müller, Marburg, Germany.
106 *Five Hundred Cases of Diffuse and General Peritonitis Following Appendicitis. J. W. Kennedy, Philadelphia.
107 A Positive-Pressure Cabinet for Thoracic Surgery. S. Robinson, Boston.
108 Diverticulitis of the Sigmoid. J. H. Barbat, San Francisco.
109 *Surgical Treatment of Exophthalmic Goiter. F. C. Zapffe, Chicago.
110 Direct Implantation of Bone Grafts. C. C. Allison, Omaha.
111 Combined Transvesical and Extraperitoneal Method for Removal of Stones from the Lower end of the Ureter. M. Ballin, Detroit.
112 *Operative Technic of Vaginal Hysterectomy for Prolapsus. T. S. Cullen, Baltimore.
113 Improved Technic for Removal of Collapsed Vulvovaginal and other Cysts and Hernial Sacs. A. J. Schoenberg, Chicago.
114 A New Device for Supporting the Arm. A. B. Eustace, Chicago.
115 An Aid to Vessel Suturing. S. Bunnell, San Francisco.

98. **Gastrojejunal Ulcers.**—The total number of operations performed on the stomach and duodenum up to Dec. 31, 1909,

done by C. H. and W. J. Mayo, was 1,775. Of these, 1,141 were gastrojejunostomies. In 715 cases the operation was for duodenal and gastric ulcer, in 167 cases for cancerous obstruction at the pylorus, and 259 were in connection with partial gastrectomy. The majority of the latter operations were for malignant disease. Of the whole number, not a single patient developed true jejunal ulcer; nor have any such cases come to the Mayos in which gastrojejunostomy had been performed by other surgeons. They report 3 cases corresponding to the gastrojejunal or pseudojejunal type of ulcer.

99. **Excision of Fat of Abdominal Wall.**—Kelly says that it is easy to see how much tissue ought to be removed by pulling the mass up and away from the body. An incision above and below on the pendulous mass made a little above the lines of deflection will remove enough and yet leave enough skin for approximation. With a little practice, the surgeon will be able to decide this with his eye as the patient lies on the back on the table, or if he is uncertain he may cut across the abdomen below from side to side and then cautiously carry the upper incision from side to side, measuring with the eye and testing the mobility of the tissues above to see that they will slide down to meet the lower flap. This dissection can be made very rapidly. All hemorrhage must be checked; deep vessels must be caught as they come out of the fascia and ligated with catgut. The incision must be carefully covered with hot gauze while operating, and the incision sloped a little inward so that apposition will be perfect. All vessels are tied with fine catgut; the fat sewn together with catgut and the skin with silkworm gut and horsehair. At either end of the incision a small cigarette drain of rubber protective tissue is inserted. The dressing is with silver foil and sterile gauze. These wounds, in spite of their immense size, heal promptly, and there is practically no postoperative discomfort.

100. **Inflammatory Tumors of the Sigmoid.**—Myer describes a primary, circumscribed, inflammatory tumor of the sigmoid, benign in its pathologic findings, but demanding radical treatment on account of a great deal of pain in the left side; a bloody discharge from the vagina; very severe constipation; at time the passing of gas, and painful stools.

103. **Congenital Sacs in Oblique Inguinal Hernia.**—Hessert claims that the chief etiologic factor underlying the development of oblique inguinal hernia in fully three-fourths of the cases can be traced to the pre-existence of a congenital sac, the result of faulty closure of a part or the whole of the vaginal process. This proposition has been sustained in the last 100 operations in Hessert's practice.

106. **Diffuse and General Peritonitis.**—In the 500 cases of diffuse or general peritonitis reported by Kennedy, there were 9 deaths. This includes the deaths in the hands of several assistants. In 124 of these cases the incision was in the median line for a general peritonitis with distention. In the remaining cases with a diffuse peritonitis, the toilet was always proportionate to the extent of involvement of the peritoneum. Three of the deaths were in patients over 70. One of the patients died one hour after the operation. This patient went on the table with a subnormal temperature of 96 degrees. Another patient lost was a vigorous man with cecum and appendix on the left side. The appendix was gangrenous and retrocecal. The error in this case was that Kennedy made the incision on the right side. It should have been in the center. The toilet of the left side would have been better and should have saved this patient; as it was, he died with symptoms of retroperitoneal infection.

All patients had the open treatment, not a stitch in the abdomen and the cofferdam drain. The Fowler position was not used in any case; in fact, the reverse position was used, the foot of the bed being elevated in the worst conditions. This position was not used with the idea of increasing or decreasing absorption, but to place the patient in the best position to resist shock of operations. Proctoclysis was not consistently used, but Kennedy has no objection to its use.

109. Published also in *Illinois Medical Journal*, March; see abstract No. 139.

112. **Vaginal Hysterectomy for Prolapsus.**—In cases in which there is a marked prolapsus of the uterus associated with much redundancy of the anterior and posterior vaginal walls and occasionally with a greater or less amount of ulceration, vaginal hysterectomy, combined with a wide removal of the surrounding vaginal mucosa, closure of the vaginal vault and repair of the perineum is the operation performed by Cullen. He outlines the area to be removed at the commencement by cutting just through the vaginal mucosa downward from the bladder, entering Douglas' cul-de-sac behind, in order that he may get his bearings, removes the uterus and joins the vaginal mucosa to the peritoneum of Douglas' pouch. The peritoneum of the anterior pelvic wall is then sutured to that of the posterior wall, and in this way the pelvis is completely shut off.

Iowa Medical Journal, Des Moines

March

116 *Blennorrhea Neonatorum—Cause, Prevalence and Prophylaxis. L. W. Dean, Iowa City.
117 *The Cost of Ophthalmia Neonatorum in Iowa. A. R. Amos, Des Moines.
118 *The Practical Aspects of Prevention of Ophthalmia Neonatorum. R. M. Lapsley, Keokuk.
119 Morbid Worry. W. J. Egloff, Mason City.
120 *Early Diagnosis of Diseases of Children that lead to Deformities. F. Mueller, Chicago.
121 Cholangeitis. N. Schilling, New Hampton.
122 Cholecystitis. S. T. Gray, Albia.

116, 117, 118, 120. Abstracted in The Journal, July 17, 1909, pp. 229, 230.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

March

123 *Cerebrospinal Meningitis in an Infant Two Months Old: Diagnosis made by Tapping the Lateral Ventricles: Treatment by Intraventricular Injections of Flexner's Antimeningitis Serum: Recovery. L. Fischer, New York.
124 Lithia Waters as Therapeutic Agents. H. Leffmann, Philadelphia.
125 Tonsillar Hypertrophy. R. B. Scarlett, Philadelphia.
126 Joint Conditions Causing Pensionable Disabilities. J. T. Rugh, Philadelphia.
127 *The Coal-Tar Derivatives versus Opiates. C. E. deM. Sajous, Philadelphia.

123. Published in *The New York Medical Journal*, March 26, 1910, and abstracted in The Journal, April 9, 1910, p. 1234.

127. **Coal-Tar Derivatives Versus Opiates.**—Sajous points out that the history of coal-tar derivatives as therapeutic agents shows that it is not through the medical profession that the sins attributed to them have been perpetuated, but through lay manufacturers of headache powders. If such a reason were to prevail among those who oppose the use of acetanilid, antipyrin and acetphenetidin, in practice, or their retention in the Pharmacopeia, then all our valuable therapeutic agents should be similarly treated, since all in turn have once on a time been used by empirics or enterprising commercialists who look on human suffering merely as an opportunity to satisfy their greed. Even the fate of opium and its analgesic salts would be sealed by the evil reputation soothing syrups have given them.

The most important phase of the question which bespeaks their retention among official remedies, however, according to Sajous, is the relatively small proportion of coal-tar habitués as compared to the victims of the morphin habit. Even the most active agent of this class used in medicine, acetanilid, is practically inoffensive as a cause of drug mania. Withdrawal of coal-tar products gives very little trouble. Under the gradual withdrawal of the drug, tonics and the bromids, and with a little cannabis indica to subdue pain, if any, prompt recovery ensues.

Much is said of the poisonous effects of coal-tar products. If, however, we study closely the causes of the deaths they have produced, we shall find that in practically every instance the fatal results were due to their use either in excessive doses or in disorders in which experience has shown them to be contraindicated. The fatal results due to excessive dosage with "orangein," "bromo-seltzer," and the like, or to the cumulative action of too many doses within a given time, belong to the category of self-treatment by laymen and the free dispensing of proprietary drugs—features which stand outside the pale of professional responsibility, though well within the reach of legislation. Finally, it is urged against the coal-tar derivatives that although they relieve pain they do not produce sleep. In the first place, this is an error; they do induce somnolence, though this is much less marked than when opiates are used. But even were it true—nothing prevents the simultaneous use of safe advantages in their employment concomitantly, since the dose of either agent can be made smaller. Summarizing all these facts, it seems plain, Sajous says, that far from being harmful in the hands of the profession, the coal-tar derivatives have furnished the only means to avoid the use of the opiates.

Old Dominion Journal of Medicine and Surgery, Richmond

March

128 Appendicitis in Children. J. M. T. Finney, Baltimore.
129 Pityriasis Rubra Pilaris in a Negro. W. L. Gatewood and J. C. Bardin, Petersburg.
130 Pulmonary Tuberculosis—Its Early Diagnosis and Subsequent Management. W. D. Tewksbury, Catawba, Va.
131 Successful Enucleation of a Meningeal Endothelioma Involving the Motor Cortex. S. H. Watts, *Charlottesville, Va.*
132 Peroneal Palsy of Obstetric Origin. A. Gordon, Philadelphia.
133 The Life and Work of Andreas Vesalius. D. K. Shute, Washington, D. C.

Detroit Medical Journal

March

134 Infectious Foci of the Mouth, Nose and Throat. H. L. Begle, Detroit.
135 Chemical Therapeutics. F. T. F. Stephenson, Detroit.
136 Chorea. A. D. Potter, Detroit.
137 Syphilitic Arthropathies. N. E. Aronstam, Detroit.

Illinois Medical Journal, Springfield

March

138 Surgical Aspects of Exophthalmic Goiter. A. H. Ferguson, Chicago.
139 *Surgical Treatment of Exophthalmic Goiter. F. C. Zapffe, Chicago.
140 *Medical Treatment of Exophthalmic Goiter. M. M. Portis, Chicago.
141 *Treatment of Exophthalmic Goiter with Serum of Thyroidectomized Animals. S. Krumholz, Chicago.
142 Organotherapy: Historical Review and Critique. A. C. Croftan, Chicago.
143 *Adrenal Therapy. C. E. deM. Sajous, Philadelphia.
144 Orchitic and Ovarian Therapy. G. Schmauch, Chicago.
145 Thyroid Therapy. J. B. Herrick, Chicago.
146 Medical Inspection of Public School Children. G. W. Rice, *Champaign.*

139. **Surgical Treatment of Exophthalmic Goiter.**—It is held by Zapffe that any one who has had an opportunity to observe the results which follow the surgical treatment of exophthalmic goiter must confess that it is the best treatment for this disease in nearly every case, although not every case of exophthalmic goiter is suitable for surgical treatment. Most authorities are agreed that in cases in which surgery has failed to produce good results it was not the fault of the operation, but the fault of too late an operation being performed. Surgical treatment should not be considered a last resort, but should be looked on in the same manner as the medical treatment is regarded—as a form of treatment, and not as the last thing to be attempted, in the hope of giving the patient relief. An early operation, a careful operation, done by an experienced operator, and not by an occasional operator, are essential to success.

140. **Medical Treatment of Exophthalmic Goiter.**—Surgery, says Portis, has demonstrated more brilliant results than medicine so far. But not all cases are surgical. The mild cases, the patients with acute symptoms, the advanced cases with cardiac degeneration, the patients who although operated on have not improved, all these should be treated medically. The internist should not temporize with patients who resist medical measures or those who relapse of acute symptoms. These cases are surgical, and the patients should be operated on when the acute symptoms are under control and before they have gone too far as chronic cases. Then, and then only, will the unusual mortality be improved.

141. **Serum Treatment of Exophthalmic Goiter.**—It is Krumholz's opinion that this serum is the most valuable drug as yet offered. In most cases nearly the whole symptom-complex is ameliorated. The subjective symptoms subside. The tremor and nervousness diminish, and the nutritional disturbance is markedly lessened. In some cases the thyroid gland is reduced in size and occasionally the exophthalmos recedes. The tachycardia is reduced more promptly and effectively with the serum than with any other therapeutic agent. Taking the 14 cases under his observation as a basis for computation, the ailment did not recur in 2 cases after a lapse of several years, equaling 14.3 per cent.; marked improvement resulted in 42.8 per cent.; slight improvement in 35.6 per cent. In one case, or 7.1 per cent., there was no response to treatment. After treatment had ceased, relapses occurred in 5 cases after periods of 9, 8, and in the last three, 6 months, respectively. These figures seem to indicate that the serum has an accumulative action like iodothyrin, and, in order to secure permanent relief, should be administered at intervals. It is interesting to note that after the first few days of the serum treatment the pulse rate increased in 5 cases and the weight decreased in 5 cases. Krumholz emphasizes that to secure favorable results it is essential to reach and maintain a point of neutralization and then approximate the doses in each case, for the reason that small doses have no marked beneficial effect, while an excessive quantity aggravates the condition. There is no standard dose. The usual maximum dose administered in Krumholz's series of cases consisted of 120 drops of the liquid or 60 grains of the desiccated serum.

143. Published in the *Monthly Cyclopedia and Medical Bulletin*, February, 1910, and the *Interstate Medical Journal*, February, 1910; abstracted in THE JOURNAL, March 19, 1910, p. 1010.

Western Medical Review, Omaha

March

147 Bacteriology of Acute Infectious Diseases of Bone. H. N. Waite, Lincoln.
148 Surgical Treatment of Rachitic Deformities. H. W. Orr, Lincoln.
149 *Constitutional Diseases of Infancy Leading to Bone Deformity. H. M. McClanahan, Omaha.
150 When to Operate in Bone Tuberculosis. D. T. Quigley, North Platte, Neb.
151 Law Enforcement. F. L. Wilmeth, Lincoln.
152 *The Application of Business Methods to the Practice of Medicine. F. A. Long, Madison, Neb.

149, 152. Abstracted in THE JOURNAL, Nov. 20, 1909, *p.* 1762.

Denver Medical Times and Utah Medical Journal

March

153 *Arms of Precision. W. Stuver, Fort Collins, Colo.
154 Typhoid Report for Greeley, Colo., 1909. C. B. Dyde, Greeley, Colo.
155 The X-Ray in Diagnosis of Renal, Biliary, and Vesical Calculi. S. B. Childs, Denver.
156 Winter Remedies. G. L. Servous, Fairview, Nev.
157 A Bipolar Intragastric Electrode. A. G. Hurdman, Denver.
158 *Preventive Medicine.* E. V. Silver, *Salt Lake City.*

153. Abstracted in THE JOURNAL, Nov. 27, 1909, *p.* 1844.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

March 26

1 *Angina Pectoris (continued.) W. Osler.
2 *Treatment of the Surgical Forms of Tuberculosis by Tuberculin. N. Raw.
3 The Abdominal Watersheds and their Influence on the Localization of Intraperitoneal Infections. C. R. Box.
4 *Treatment of Psoriasis. E. G. G. Little.
5 Case of Heart Block. J. G. Emanuel.
6 The Antituberculosis Campaign in London. D. J. Williamson.

1. **Angina Pectoris.**—The following explanation of the pain in angina pectoris is given by Osler: Angina results from an alteration in the working of the muscle fibers in any part of the cardiovascular system whereby painful afferent stimuli are excited. Cold, emotion and toxic agents interfering with the orderly action of the peripheral mechanism, increase the tension in the pump walls or in the larger central mains, causing strain, and a type of abnormal contraction enough to excite in the involuntary muscles painful afferent stimuli. In stretching, in disturbance of the wall tension at any point, and in a pain-producing resistance to this by the muscle elements, lie the essence of the phenomena. In a man with arteriosclerosis and high pressure, and all the more likely if he has a local lesion, a syphilitic aortitis for example, disturbance at any point, of

the tension of the wall permits the stretching of its tissues. Spasm or narrowing of a coronary artery, or even of one branch, may so modify the action of a section of the heart that it works with disturbed tension, and there are stretching and strain sufficient to arouse painful sensations. The heart may be in the same state as the leg muscles of a man with intermittent claudication working smoothly when quiet, but instantly an effort is made or a wave of emotion touches the peripheral vessels, anything which heightens the pressure and disturbs the normal contraction, brings on a crisis of pain.

2. **Tuberculin Treatment of Surgical Tuberculosis.**—Sixty-one cases of tuberculous glands in the neck and elsewhere have been treated by Raw with human tuberculin with astonishing and excellent results. He is strongly averse to extensive dissections in the neck with the object of clearing out all tuberculous glands. He advises that caseating or suppurating glands should always be opened or removed as they are a source of danger, but states that the glands which are now caseating will nearly always disappear after a course of 12 or 15 injections of tuberculin. Raw looks on glands in the neck as the most favorable lesions for treatment with human tuberculin. He has treated 17 patients with tuberculous salpingitis with injections of Koch's tuberculin having previously had the tubes removed by operation. Several of the women have been completely cured, with increase of weight and loss of all symptoms, although in 5 cases the bladder was involved. Tuberculosis of the genitourinary apparatus seems to respond well to tuberculin treatment, and of 26 patients 14 seemed to receive lasting benefit, while 12 progressed. Many of these cases were advanced, but in early cases the individuals respond well to treatment. A tuberculous testicle should always be removed, says Raw, as by remaining it is liable to be followed by acute generalized tuberculosis. Tuberculous kidneys should not be removed unless suppuration is present, as they improve and often remain useful organs after tuberculin treatment. Tuberculous ulcers in the bladder are often very intractable, and may require some surgical interference as well as tuberculin, but they sometimes heal altogether without operation.

4. **Treatment of Psoriasis.**—Of all the local applications employed in psoriasis, Little holds that none can compare in efficiency with chrysarobin added to a fairly adhesive ointment base, such as the following:

	gm. or c.c.		
Kaolin	8		ʒii
Starch			
Lanolin, āā	16	or	ʒiv
Paraffin, fluid	8		ʒii
To this is added chrysarobin	1-2		gr. xv-xxx

The ointment thus resulting may be applied to the face and the forehead where the hair joins the skin—a very frequent position for obstinate patches of the disease. It should be used at night and removed in the morning either with petrolatum or with benzen; the latter is especially useful on hairy parts, and all trace of the ointment should be removed before washing the parts with soap, which in combination with chrysarobin, produces purple discoloration of the hair. The patient must be warned of the danger of conjunctivitis from contact of the conjunctiva with chrysarobin. On the hands the most convenient covering is a pair of cotton gloves, which may be used again and again. The more the ointment soaks into the glove, the more efficacious it becomes. On the covered parts of the body the adhesive ointment mentioned can be left *in situ*, and the proportion of chrysarobin increased to half a dram to the ounce; it will not come off with mere rubbing, so that the bath need not be prohibited.

British Medical Journal, London

March 26

7 Epilepsy. W. A. Turner.
8 *Optic Neuritis and Suppurative Otitis. J. S. Barr and J. Rowan.
9 *Scopolamin-Morphin Narcosis. R. H. Jamieson.
10 Death Under Spinal Anesthesia by Jonnesco's Method in Acute Intestinal Obstruction. F. V. Milward.
11 Hemopneumothorax without Traumatism: Recovery. R. B. Ness and G. A. Allan.
12 Acute Tuberculous Bronchopneumonia after Gastroenterostomy. W. A. Mackay, I. MacDonald and H. G. Sutherland.
13 *A Typhoid Bacillus-Carrier. J. R. Hutchinson.
14 Syphilitic Leucoderma in a Male. K. H. Jones.
15 Relation of the Parovarium to Cyst Formation. P. P. Cole.
16 Electrocardiographic Curves Yielded by Ectopic Beats Arising in Walls of the Auricles and Ventricles. T. Lewis.

8. **Optic Neuritis and Suppurative Otitis.**—The conclusions arrived at by Barr and Rowan are founded on the examination of the eyes and ears of 160 patients. When possible, each individual has been kept under observation until the termination of the ear affection in recovery, either as the result of local treatment or after operation. Barr and Rowan found that apart from optic neuritis, vascular changes of a lesser degree are frequent (39 times in 160 cases, or about 25 per cent.). Cases of purulent middle-ear disease, in which optic neuritis or vascular engorgement of the fundus is present, are much less amenable to local treatment than those in which the fundus is normal. As a general rule, an improvement in the eye condition is accompanied by improvement in the aural condition, while an increase in the intensity of the changes in the fundus or their persistence is associated with less amenability to treatment and greater gravity of the ear condition. The most probable cause of vascular engorgement of the fundus or optic neuritis is serous meningitis (diffuse or localized). Optic neuritis caused in this way is not usually followed by atrophy, and unless there are other symptoms demanding it, opening of the dura mater is unnecessary.

The practical lessons deducible are: (1) a case showing these changes in the fundus should be watched closely, and their existence regarded as an additional reason for the early performance of the radical mastoid operation; (2) if, on the other hand, they show a tendency to clear off, especially with improvement in the ear condition, or if the fundus is normal to begin with and remains so, we may, with more confidence, look for a favorable response to conservative treatment. Barr and Rowan plead for a more systematic general use of the ophthalmoscope in cases of purulent disease of the middle ear, as they are convinced that the trouble involved will be more than repaid by the results, both as regards the progress and prognosis of this disease.

9. **Scopolamin-Morphin Narcosis.**—In the course of some pharmacologic experiments with scopolamin and morphin, Jamieson found in animals certain effects produced on the respiration similar to those which sometimes attend the clinical use of scopolamin and morphin as an anesthetic. Clinically, one meets with those apparently alarming cases in which the respiration is greatly reduced, to 5 or 6 a minute, and Jamieson's work shows the clinical importance of artificial respiration in cases of an overdose of scopolamin and morphin; and this artificial respiration, combined with drugs which stimulate the respiratory centers, such as strychnin, seems to offer the most logical method of treatment in cases of an overdose.

13. **A Typhoid Bacillus Carrier.**—The only factor common to seven cases reported by Hutchinson is the presence of the lodging-house keeper. No history of contact with known enteric fever cases, or of consumption of food likely to be infected was obtainable in any of these cases. The lodging-house keeper's medical history is as follows: Up to 1893, when she was about 54 years old, she enjoyed good health. In this year she had an attack of "influenza and pneumonia," for which she was treated in a hospital. She remembers little about this illness, except that she had severe headaches and pain in the back and was delirious. She was ill for 5 weeks and was fed entirely on fluid foods. Since this illness she has suffered from periodic attacks of abdominal pain and vomiting. These attacks did not follow immediately on the illness of 1893; there was an interval of 5 years during which her health was good. A specimen of blood obtained in November, 1907, gave a negative reaction. On Nov. 4, 1908, her blood gave a positive reaction in 30 minutes. Feces and urine contained typhoid bacilli. Hutchinson deems it highly probable that the combination influenza and pneumonia of 1893 was in reality enteric fever. It is remarkable that she was not known to have infected any one prior to 1898, particularly so as she was engaged in general housework, including the preparation of food, etc., for her lodgers. Certainly her attacks of abdominal pain, etc., do not seem to have troubled her prior to the middle of 1898. The cases reported occurred in 1898 (1), 1905 (2), 1906 (2), 1907 (1), and 1908 (1).

Medical Press and Circular, London

March 9

17 Gonorrheal Retro-ocular Neuritis and Myelitis. W. Gowers.
18 *The Cerebellum and Its Diseases (continued). J. S. R. Russell.
19 Treatment of Acute Peritonitis. J. M. Paton.
20 Coxa Vara. J. S. Darling.
21 Etiology, Prophylaxis and Treatment of Cerebrospinal Meningitis. H. de Meric.

March 16

22 Nasal and Aural Hemorrhage; Three Causes and Treatment. A. Wylie.
23 Curettage of the Uterus. S. G. Kirby-Gomes.
24 Treatment of Labor in Contracted Pelvis: Especially Justifiability of Pubiotomy. G. F. Blacker.

18. Published in the *British Medical Journal*, March 12, 1910.

Clinical Journal, London

March 9

25 Exophthalmic Goiter. W. P. Herringham.

March 16

26 *Question of Position and Early Movement after Abdominal Operations. C. M. Moullin.
27 Degeneration of the Spinal Cord. J. A. Ormerod.
28 Cancer. F. M. Sandwith.

26. **Position and Early Movement After Abdominal Operations.**—Whether or not patients after abdominal operations should be allowed to get up sooner than is the custom at present is a question well worth considering. Moullin is strongly disposed to believe that we are still too much tied down in this respect by the traditions of the old, bad system of septic surgery with its suppurating wounds. He agrees that when a wound is full of pus no relaxation can be allowed, but aseptic wounds are a new development and must be judged by totally different standards. So far as these are concerned, it is time, he declares, that we discard ancient authority and think out the matter for ourselves. In the first place, a clear distinction must be drawn between allowing a patient to be lifted quietly out of bed and placed in a comfortable chair with abundance of cushions and pillows for a few hours each day, for the sake of having his meals in comfort or for other reasons, and letting him get up and get about by himself, doing whatever he thinks fit. The latter is decidedly not recommended by Moullin, if for no other reason than that it is impossible to guarantee the patient against accidents.

So far as voluntary movements are concerned, the test when a patient may be allowed to control his own actions is a simple one. Moullin has adopted it for many years past and is perfectly satisfied with it. He makes the patient, while lying in bed, put the muscles that have been divided into action, and he does not give him his freedom until the scar definitely sinks in when this is done. He takes the sinking-in to mean that the lymph which has been effused has by this time become organized, so that, provided the patient is reasonably careful, it will stand ordinary work. He sees no reason why a patient whose wound is running an aseptic course should not be raised and lifted out of bed by trained nurses the next day, if it is thought desirable. The actual choice of position may be left to the patient. Comfort is the best guide. No position which throws the least strain on the wound can be comfortable for long.

Australasian Medical Gazette, Sidney

January

29 Eugenics in the Light of Higher Civilization. G. L'Estrange.
30 Complement Deviation in Hydatid Disease. J. F. Flashman and A. G. Butler.
31 *Possibility of Treating Leprosy with Bactericidal Drugs. L. E. Row.
32 Brophy's Operation for Complete Cleft Palate. T. Fiaschi.
33 The Mayo Brothers' Clinic: Special Reference to Open Method of Ether Administration. G. Craig.
34 Life History of Hydatid Cyst. W. R. C. Mainwaring.
35 Cutaneous Reaction of von Pirquet in Diagnosis of Tubercle. E. A. Briummit.
36 Camphor-Carbolic Acid as Direct Antiseptic Application to Ulcerated Surface. J. B. Cleland.
37 *Treatment of Epistaxis by a Simple Method. J. Boyd.

31. **Bactericidal Drugs.**—For nearly 3 years Row has been experimenting with guaiacol, and finds, he says, that it has the power of destroying the *Bacillus lepræ*, causing reactions more or less pronounced according to the dose given. In mild cases the patients can take as much as 12 minims, 3 times a day, by the mouth, without any sign of suppuration occurring, but if a similar dose be given in advanced cases, extensive suppuration will result. Care must be taken to accustom the patient to it gradually, and no more than 4 or 5 minims, 3 times a day, should be given for the first 2 or 3 months. At the end of this time the dose can be gradually increased by 2 minims at a time till the maximum dose is reached—say from 12 to 14 minims, 3 times a day. In advanced cases of nodular leprosy no more than 15 minims a day should be given, but in mild cases up to 36 or 40 minims a day can be given with safety, under careful supervision. Should suppuration occur, however, the dose must immediately be reduced. When a patient suffering from nodular leprosy is placed under the guaiacol treatment (5 minims, 3 times a day) for the first week or two he will complain of vertigo occasionally, but this will gradually wear off, until the dose is increased, when he will again suffer more or less from it. As the patient gradually becomes used to the drug an increase in dose will not produce this symptom, as a rule.

When the patient has been under treatment for 6 or 8 weeks a considerable improvement will be noticeable in the general health, but no change takes place in the tubercles for about 4 months. At the expiration of this time, however, the tubercles become softer in the center, and absorption commences. This is a slow process, but it is progressive, and in the course of a few months a considerable diminution in the size of the tubercles can be noticed. Row has tried this treatment on over 50 patients, for variable periods, in all stages of the disease, and states that there has been distinct improvement in every one, so long as the patient persevered; but retrogression occurred when the use of the drug was discontinued. In the most advanced cases the improvement was slight, but it has been very marked in those patients who have not reached such an advanced stage of the disease that their resisting forces have been more or less destroyed. Out of 31 patients who persevered with the treatment, 3, at least, have advanced toward recovery to such an extent that it is extremely difficult to obtain evidence of the existence of bacilli in specimens taken from them, and even when such bacilli are found they are not normal. These 3 patients, he asserts, are in the best of health and never have the least sign of fever, pain or malaise.

37. **Treatment of Epistaxis.**—Boyd describes his method as follows: Take a piece of fine starched muslin from 5 to 6 inches square. Impinge the points of a closed dressing forceps—a thin penholder will do—in the center, and pull the muslin over the forceps, forming a closed umbrella appearance with the forceps forming the handle. This is passed through the nostril until it comes in contact with the posterior nasopharyngeal wall, when the forceps is withdrawn. The ends of the muslin are now spread over the face and held in place by the fingers of the left hand, and the hollow cone left is rapidly plugged from behind forward with small pieces of cotton wool soaked in any available styptic, *i. e.*, vinegar, as firmly as is thought desirable; the projecting ends of the muslin are trimmed off, and the little operation is completed easily in a couple of minutes. The second nostril is similarly dealt with if necessary. If it be not necessary to plug the postnasal fossa (doing the latter will almost invariably leave temporary deafness), the muslin cone, after withdrawal of the forceps, can be pulled forward to clear the posterior wall of any pressure before the plugs are introduced. The muslin should not be moistened, and the little plugs should be rapidly introduced before the cone gets flabby with moisture, as they slip in so much more easily.

Dublin Journal of Science

March

38 Treatment of Syphilis by Intramuscular Injections of Mercury. G. S. Walton.
39 Duodenal Ulcer. M. K. Acheson.
40 *More About Medical Education. W. H. Thompson.

40. **Medical Education.**—The chief points contended for by Thompson may be summarized as follows: The teaching given in the laboratories of medical schools has a direct or clinical bearing to a greater degree than is generally recognized. The standard in anatomy and physiology is not higher now than it was during the four-year curriculum. The dissatisfaction on the part of the hospital with the present state of affairs has chiefly arisen from a normal development—namely, the natural growth of laboratory instruction—in accordance with the recent progress in medicine. It would be unwise to check this growth, and the hospital would benefit by providing

greater facilities for utilizing to a fuller extent the laboratory teaching given to the students. The hospital would gain by adopting a more developed class system and enforcing a more regular attendance. The changes in the medical curriculum commonly suggested by clinical teachers—namely, the exclusion of botany and zoology, together with the proposal to reduce anatomy and physiology, and confine them to the first two years, Thompson thinks, would entail a postponement of hospital work till the third year or even later in the case of students who fall behind. The compression of work into the early years of the curriculum, coupled with the relegation of the final examinations to the end of the fifth year, would leave the third and fourth years very light, and he thinks, would not help the student.

Archives Générales de Chirurgie, Paris

February, IV, No. 2, pp. 111-220

41 *Osteoma of the Brachialis Anticus. Vandenbossche.
42 *Arthritis due to the Sporothrix. (Arthrites sporotrichosiques.) P. Moure.
43 *Metal [illegible] f Stumps after Fracture of the Radi [illegible] la diaphyse radiale avec une bague [illegible] Mauclaire.

41. ***Osteoma of the Brachialis Anticus.***—Vandenbossche gives the details of 4 cases from his experience, the lesion developing after luxation and fracture or separation of the epiphysis. Spontaneous retrogression during immobilization may occur as in two of his cases. Immobilization, he declares, is important from the standpoint of prevention in all cases of dislocation of the elbow. If the osteoma involves the joint, operative treatment must be that for ankylosis in general. Time aids in the cure of an osteoma and surgical measures, he states, should not be instituted for at least a year after development of the lesion, and then only when there is important functional impotency.

42. **Arthritis Due to the Sporothrix.**—Moure reports a case in which a serious joint affection commenced with accumulation of fluid in the joint, assumed to be of syphilitic origin, this diagnosis being confirmed by the benefit at first under mercury and iodid treatment. The lesion continuing to progress, a cold abscess developed below and the diagnosis was changed to tuberculosis as there was nothing in the history of the case so far to indicate a mycosis. But when the abscess perforated outward and the germs gained access to the lymphatics, 28 subcutaneous nodules developed along their course. The sporothrix was cultivated in pure cultures and no signs of tuberculosis developed in animals inoculated with material from the lesion. The findings in the case are illustrated and compared with 2 similar cases on record. Moure has also found the sporothrix present in 4 out of 36 cases of various surgical affections during the last 18 months, and he is convinced that systematic search for this germ would elucidate many puzzling surgical lesions and enable a prompt cure under potassium iodid. When the lesion is advanced, the sporothrix may have been killed off by its own products or by secondary infection, but the nature of the process can be readily differentiated by the fixation of complement test and sporoagglutination or still more easily by tentative administration of potassium iodid. He is convinced that many patients who now drag from hospital to hospital on account of closed or open subacute or chronic osteoarthritis, could be promptly cured if this were done.

43. **Bracelet Clamp in Treatment of Fracture of the Radius.**—Mauclaire describes the methods in vogue for coaptation of the stumps in fracture of the radius when there is a marked tendency for the stumps to deviate toward the ulna and comments on the drawbacks of the various methods. He then describes a broad metal bracelet which he applies to the bone and which holds the stumps in the correct position by means of an inner shell which is forced firmly down on the bone by a thumbscrew.

Bulletin de l'Académie de Médecine, Paris

March 15, LXXIV, No. 10, pp. 261-291

44 *Tumor of the Pineal Gland in Children. F. Raymond and H. Claude.

44. **Tumor of the Pineal Gland in Children.**—Raymond and Claude report a case which seems to demonstrate that it may be possible to differentiate early a tumor in the pineal gland and thus permit its removal in time. This is also shown by 5 other cases in children that have been reported in detail in recent literature. Besides the signs of extreme hydrocephalus, the syndrome includes indications of defective or exaggerated functioning on the part of several of the glands with internal secretion. The location of the pineal body commanding the blood vessels that drain the central regions of the brain explains, he says, the liability to sudden and extreme hydrocephalus. In the case described the tumor in the pineal body had been diagnosed during life. The first symptoms in the patient, a boy of 7, were headache on the right side, radiating to the eye, nose and upper jaw on the same side; when the attack of headache was very severe, there was liable to be vomiting. A tooth was pulled, and quinin was given, and the attenuation of the disturbances seemed to coincide with this treatment. A year later the attacks returned and the child who had been growing normally hitherto became quite obese and too weak to walk; vision became poor, and the eyeballs deviated toward the right; quinin, mercury and iodid gave no relief, but some benefit followed three lumbar punctures. By the end of the second year amaurosis was complete and another lumbar puncture had a disastrous effect, being followed by intense headache, vomiting, general depression and absolute gastric intolerance. Some improvement was evident after three months, but the child was too weak to walk. The hair on the pubis was developed like that on a youth of 15 and there was down on the upper lip and cheeks, but the genital organs were undersized. The child died in coma three years after the first symptoms and autopsy revealed a gliomatous tumor in the region of the pineal gland with atrophy of the hypophysis.

Bulletin de la Société de Pédiatrie, Paris

February, XII, No. 2, pp. 85-127

45 *Oiled Silk in Treatment of Edema and Sclerema in New-Born Infants. (Traitement de l'œdème et du sclérème idiopathiques des nouveau-nés débiles par l'enveloppement dans le taffetas gommé.) H. Dufour.
46 *Joint Tuberculosis with Valvular Lesions. (Note sur les arthropathies tuberculeuses, avec lésions valvulaires du cœur.) M. H. Barbier.
47 Cricotracheal Stenosis Following Intubation. (Trois cas de laryngostomies pour sténoses cicatricielles cricotrachéales ayant nécessité la trachéotomie.) M. Guisez.
48 Radioscopy in Pneumonia in Children. (Le triangle axillaire de la pneumonie infantile. Etude de radioscopie clinique.) E. Weill and G. Mouriquand.

45. **Oiled Silk in Treatment and Prevention of Idiopathic Sclerema and Edema in the New-Born.**—Dufour treats prematurely born infants with a tendency to sclerema or edema by wrapping them in oiled silk instead of putting them in an incubator. Since he adopted this method of treatment two years ago these two syndromes have entirely disappeared from his service. The aim is to keep in the child's heat, and the infant is wrapped completely in the oiled silk, only its head protruding, as it is the excessive loss of heat by these weakly prematurely born infants, he says, which leads to production of the sclerema and edema. Tibone has also recommended the use of oiled silk but he merely wraps the limb affected with the sclerema with cotton with oiled silk or rubber tissue outside, the aim being thus different from Dufour's total pack.

46. **Tuberculous Arthropathies with Valvular Disease of the Heart.**—Barbier calls attention to a syndrome in which the symptoms seem to indicate rheumatism but they develop into a tuberculosis syndrome in time. In the case first described a girl of 15 had had recurring attacks of this tuberculous rheumatism, the knee, hip and shoulders being extremely painful and the patient shrinking from the slightest movement of the limb involved; there was no redness, edema or swelling of the joint. A concomitant chronic endocarditis was probably of the same tuberculous nature. The patient finally succumbed to rapid involvement of the lungs, four years after the first symptoms. In the second case the patient was a girl of 13 with pain in the right knee and hydrarthrosis, the disturbances subsiding and returning at intervals during the year and at last involving several joints with signs of a mitral lesion and of an apical process. The intradermal tuberculin test elicited a positive response, but under sanatorium treatment the joint disturbances rapidly and entirely retrogressed and the general condition improved.

Presse Médicale, Paris

March 16, XVIII, No. 22, pp. 185-192

49 Relations between the Nasal Mucosa and the Genital Apparatus. (Relations entre la muqueuse du nez et l'appareil génital de la femme.) G. Mahu.
50 Insoluble Radium Salts in Therapeutics. (Des sels de radium insolubles en thérapeutique.) H. Dominici.

Semaine Médicale, Paris

March 16, XXX, No. 11, pp. 121-132

51 *Six New Signs of Organic Hemiplegia. J. Lhermitte.

March 23, No. 12, pp. 133-144

52 Medicopsychologic Study of Intellectual Superiority. (M. Henri Poincaré.) E. Toulouse.
53 Treatment of Fat Embolism by Temporary Drainage of the Thoracic Duct. (Traitement de l'embolie graisseuse par le drainage temporaire du canal thoracique.) M. Wilms.

51. **New Signs of Organic Hemiplegia.**—Lhermitte comments on six new signs that have been recently discovered as showing that hemiplegia from some organic cerebral cause is far from being of as simple origin as previously imagined. The evidence of hypertonicity with the organic form and its constant absence in hysteric paralysis confirms the difference in their mechanism. Claude has recently called attention to a sign of curable organic hemiplegia, in that the paralyzed member may make spontaneous movements in response to stimulation of the skin or muscle. In three cases of complete cerebral paralysis of the arm, the hand and fingers became flexed or the arm bent up when the skin was pinched or the arm was suddenly turned. Similar movements could be induced in the paralyzed leg by pinching the skin of the outer aspect of the thigh. The foot could be flexed by pinching the muscle in the thigh. In all these cases in which this automatic movement could be induced the hemiplegia subsided within a month after the apoplexy. Raimiste's hand sign was described in THE JOURNAL, March 12, 1910, page 871: If the forearm and hand are placed vertically on a table and the supporting hands are suddenly withdrawn, the wrist drops with cerebral hemiplegia while the hand retains its vertical position under other conditions. The same writer has also called attention to a movement of abduction in the paralyzed leg when the patient is directed to abduct the sound leg and the movement is suddenly prevented, the patient lying on a hard bed. The effort made is revealed in the movement of abduction on the part of the paralyzed limb, although the limb is incapable of making any spontaneous movement. This associated abduction or adduction is not observed in health nor in hysteric hemiplegia. Néri has found that the leg presents a phenomenon similar to Raimiste's drop wrist or hand sign: With the patient reclining, the paralyzed limb becomes flexed when the leg is raised to form an angle with the plane of the bed of 50 degrees, while the sound leg can be raised to an angle of 75 degrees without flexing. The same phenomenon can be induced by having the patient bend over as he stands, the legs apart. As the trunk is held horizontal the paralyzed leg becomes flexed while the sound limb remains extended. This hypertonicity of the flexors of the limb can be made evident in the coma phase. Souque's sign is induced by passive raising of the arm. As it is raised the fingers become extended and spread apart like a fan. He found this sign 17 times in 29 cases of hemiplegia, although of course it is not apparent when the paralysis is complete. Klippel and Weil have also called attention to the thumb sign, that is, slight extension of the thumb as the other fingers are slowly lifted. They found this sign constant in 9 cases of hemiplegia with contracture. while it was never present with flaccid paralysis. The hand sign and associated adduction sign are observed with the flaccid form.

Archiv für Gynaekologie, Berlin

XC, No. 2, pp. 213-438. Last indexed March 5, p. 823

54 Intrauterine Injections in Treatment of Inflammation in the Adnexa. E. Aulhorn.
55 Seroreaction in Pregnancy and Puerperium. (Eine "Reaction" im Serum Schwangerer, Kreissender und Wöchnerinnen.) T. Heynemann.
56 Colon Bacillus Infection of the Female Urinary Passages in Pregnancy and the Puerperium. (Infection der weiblichen Harnwege durch das Bacterium coli commune in der Schwangerschaft und im Wochenbett.) P. Alsberg.
57 Closure of Botallo's Duct. (Der Verschluss des Ductus arteriosus Botalli.) F. Kirstein.
58 Lymphangioma of Fallopian Tube. R. Franz.
59 Relations between the Albumin in Human Milk and the Albumin in the Serum of Mother and Child. (Beziehungen zwischen dem Eiweiss der Frauenmilch und dem Serumeiweiss von Mutter und Kind.) A. Bauereisen.
60 Pathologic Anatomic Findings in Recurring Uterine Carcinoma. (Untersuchungsbefunde an Recidiven nach Uteruscarcinomoperationen.) M. Stickel.

Beiträge zur Klinik der Tuberkulose, Würzburg

XV, No. 2, pp. 175-302. Last indexed March 12, p. 916

61 *Dosage in Tuberculin Tests. A. van Balen.
62 Local Tuberculin Reaction in Clinically Sound Adults. Id.
63 *Effect of Tuberculosis on the Heart. F. M. Pottenger (Monrovia, Cal.).
64 Morphologic and Biologic Research on Tubercle Bacilli Stained with Methyl-Violet-Fuchsin. W. Knoll.
65 *Treatment of Laryngeal Tuberculosis in Public Sanatoriums. (Zur Behandlung der Kehlkopftuberkulose in der Volksheilstätte.) H. Clarus.
66 Probable Tuberculous Disease of the Lymphatic Apparatus. (Zur Kenntnis von Sternbergs sogenannter "Eigenartiger Tuberkulose des lymphatischen Apparates.").. F. Graetz.
67 Problem of Experimental Immunization against Tuberculosis. G. Deycke and H. Much.

No. 3, pp. 303-482

68 *Clinical Experiences with Treatment of Pulmonary Tuberculosis by Nitrogen Injections. C. Saugman and T. B. Hansen.
69 Position of Diaphragm in Health and with Emphysema. (Der Stand des Zwerchfelles bei Gesunden und Emphysematikern.) Seefeldt.
70 Results of Combined Institutional and Tuberculin Treatment of Pulmonary Tuberculosis. (Mitteilung zu Bandeliers Arbeit, Band XV, Heft 1.) F. Köhler.

61. **Dosage for Tuberculin Tests.**—Balen has been testing the subcutaneous injection of tuberculin on clinically sound adults and found that a local reaction may occur in them even with the smallest doses, but the subjective phenomena: headache, nausea, drowsiness or insomnia, signs of a general reaction, were never observed in those free from tuberculosis. The signs of general reaction did not develop until a few hours after the absorption of the tuberculin which confirms that they are the effect of the action of the tuberculin, and equivalent to a positive diagnosis of tuberculosis. In small children the tuberculosis is always active. In adults it is important to know not only whether there is reaction, but the dose and the manner of the reaction. Only when there is infiltration and redness to a dose less than 1/100 mg. should enhanced susceptibility be assumed. A positive general reaction with only 1/10 mg. or less speaks for the disease. With active tuberculosis this reaction may occur with 1/100 or even 1/1000. He believes that his is the first research to determine the smallest amount of tuberculin which induces a reaction local, general or topical.

63. Abstracted in THE JOURNAL, Nov. 6, 1909, page 1595.

65. **Treatment of Laryngeal Tuberculosis in Sanatoriums.**—Clarus comments on the fact that laryngeal tuberculosis is rarely diagnosed when there are concomitant lung lesions. In 190 patients at the Görbersdorf Sanatorium only 50 had had the larynx examined and yet 16 of the others had a laryngeal process. It is of great importance for the prognosis of pulmonary tuberculosis to know whether there are complications on the part of the larynx. This is liable even with the mildest cases. Sunlight and induced hyperemia may be useful as adjuvants but too much reliance must not be placed on them. Absolute rest of the voice is of the greatest importance, supplemented by menthol, either as intralaryngeal injections of menthol oil or inhalation of hot menthol fumes for hours at a time. He injects a few drops of the 10 or 20 per cent. oil at first daily and then two or three times a week. As the best of all measures for general application in the sanatorium he commends the actual cautery under cocain; he has thus treated 34 patients with most excellent results, 14 being entirely cured and 17 improved. He cites a few typical cases from this experience.

68. **Treatment of Pulmonary Tuberculosis by Pneumothorax Induced by Injection of Nitrogen.**—Saugman and Hansen devote over 150 pages to a detailed report of their experiences with the artificially induced pneumothorax in 54 cases in nearly three years. They found *x*-ray examination indispensable. With the technic illustrated they have made 970 injections without a trace of tendency to air embolism. In 33 cases an interval of eight months at least has elapsed and

study of these cases shows that in combinaton with institutional treatment, it is possible to save a large percentage of patients otherwise hopelessly lost. This result was obtained in 11 out of 24 cases in which the treatment was completed. The method should be restricted to severe, predominantly unilateral pulmonary tuberculosis; it is free from danger and the technic is simple but in about a fourth of the patients the adhesions in the pleura render the method inapplicable. They never witnessed serious mishaps but in some cases there was effusion into the pleura which sometimes had a favorable influence on the outcome, although troublesome at first. The treatment must be kept up for one year at least in acute cases and for two or more years in the chronic. A number of skiagrams and tracings are appended.

Beiträge zur klinischen Chirurgie, Tübingen

January, LXVI, No. 1, pp. 1-192

71 *Tuberculosis plus Adenocarcinoma of the Breast. H. Klose and H. Vogt.
72 *Malignant Hypernephroma in Children. O. Franck.
73 *Malignant Chorioepithelioma Diagnosed Early by Abdominal Curetting. Lehmann.
74 Multiple Amniogenic Malformations plus Peculiar Tumor Formation. F. Grahl.
75 Ileus from Chronic Diverticulitis. (Darmverschluss bei chronischer Entzündung des Meckel'schen Divertikels.) H. Finsterer.
76 Primary Suture of the Lung. (Zur Frage der primären Lungennaht bei Lungenverletzungen.) W. Wolf.
77 *Transp [illegible] Vessels. (Transplantation freier und [illegible]
78 *Success[illegible] priva Tetany. [illegible] tion bei Tetania [illegible]
79 Perforated Gastric Ulcer in Etiology of Necrosis of the Pancreas. K. Fritsch.
80 Hernia i[illegible] from the Median Line. (Ueber [illegible] seitlich der Mittellinie unter [illegible] der Hernien der Linea semilun[illegible]
81 Hammer-Toe Flatfoot and Club-Toe Flatfoot. (Hammerzehenplattfuss und Klumpzehenplattfuss.) H. Rubritius.
82 *Influence of External Irritation in Origin of Carcinoma. (Bedeutung des äusseren Reizes für die Entstehung der Carcinome.) E. Rehn.
83 Sarcoma of the Omentum. (Netzsarkom.) Capelle.

71. **Combination of Tuberculosis and Neoplasms.**—Klose and Vogt report a case in which a tuberculous process and an adenocarcinoma developed coincidently in the right breast. The patient was a woman of 25 with objectively sound internal organs who had nursed her one child for about a year when the breast became painful and was treated for five months on the assumption of suppurative mastitis. The authors have been able to find only 16 similar cases on record, and they assume in their case that the cancer developed on a primary tuberculous process.

72. **Malignant Hypernephroma in Children.**—Franck reports a case in a boy of nearly 9, who had always been pale and weak. Six weeks after an acute pericarditis the symptoms of the malignant disease became apparent and the tumor soon penetrated into the thorax. This is the fourth case on record, he says, in which a malignant hypernephroma developed in a child. The other children were between 2 and 5 years old; in one the tumor had developed on a horseshoe kidney. All were distinguished by extreme malignancy but no hematuria was observed. In the 222 cases of hypernephroma he has found on record a traumatic factor was evident in only 8 instances.

73. **Early Diagnosis and Removal of a Chorioepithelioma.**—An apparently healthy woman of about 30 with a healthy child was brought to the hospital on account of persisting hemorrhage after abortion. Curetting disclosed nothing pathologic. A year later she was brought again on account of hemorrhage from abortion and high temperature, but nothing pathologic was found in the fetus. As the symptoms continued, the abdomen was opened and the site of the placenta was resected. It proved to be also the site of an incipient malignant chorioepithelioma, one of the earliest ever discovered, and probably the cause of the abortion and symptoms observed.

77. **Transplantation of Vessels.**—In the experiments reported from Garrè's clinic, the transplanted vessels were able to retain their structure for months, up to 122 days. Vessels kept in Ringer's or Locke's fluid could also sometimes be effectually transplanted, and even human vessels were successfully implanted in some of the animals.

78. **Transplantation of Parathyroid Tissue to Cure Tetany.**—Danielsen reports a case in which a woman of 51 with menacing postoperative tetany after removal of a very large colloid goiter was apparently saved by implantation of two parathyroids removed from two other patients at the same time during a strumectomy. The glands were transplanted in a few moments after their removal, being inserted in a pocket made for them between the fascia and the peritoneum, just above the umbilicus. A few severe convulsions occurred after the transplantation but they rapidly subsided in number and intensity and examination after seven months showed approximately normal conditions. The circumstances of the case seem to show, Danielson says, that the transplanted glands were mainly responsible for the favorable outcome of the case. The technic for strumectomy to avoid injury of the parathyroids is discussed in detail and the indications for transplantation.

82. **External Irritation in Development of Cancer.**—Rehn analyzes five typical cases from his experience in which external irritation might possibly have had something to do with the growth of a cancer. It was in a hemorrhoidal nodule in one case, in the palm of the right hand in another, and on the leg in the others.

Berliner klinische Wochenschrift

March 7, XLVII, No. 10, pp. 421-468

84 *Healing [illegible] tric Ulcer. (Heilung des perforierte[illegible] M. Martens.
85 Special [illegible] of the Jaw. (Eigenartige Form von [illegible] W. Spät.
86 *Permanent Retention of Urine. (Ungewöhnliche Fälle dauernder Harnverhaltung.) L. Casper.
87 *Intraneural Injections in Treatment of Neuralgia and Prevention of Salt Fever. O. Wiener.
88 *Gastroptosis and its Origin. M. Bönniger.
89 Casein Content of Human Milk. (Caseingehalt der Frauenmilch.) Engel and A. Frehn.
90 Recent Progress in Tropical Medicine. P. Mühlens.

84. **Healing of Perforated Gastric Ulcer.**—Martens has encountered 22 cases since 1895, all but 2 within the last 7 years. The patients were from 6 to 60 years old; most of them had suffered from stomach disturbances, but blood in the stomach content or stool had seldom been noticed, and in some cases the perforation occurred without any preceding symptoms. He discusses the differentiating signs: If the stomach content and pus have followed the colon down toward the region of the appendix it is liable to be painful, deceptively simulating appendicitis. Tense rigidity of the right side of the abdomen, especially the upper part, was evident in all but one of his cases. Soon after the perforation the abdomen is almost always retracted; distention follows as the intestines become paralyzed. That technic is best which makes least demands on the patient, namely, simple suturing in of the ulcer in two tiers. He has always been able to accomplish this, applying the suture transverse to the longitudinal axis of the stomach, at least at the pylorus, in order to prevent making it smaller. If the lumen is made smaller by the suture he makes a gastroenterostomy at once. The suture is reenforced with a flap of omentum. In one of his cases there were two perforated ulcers; a second one should always be looked for. Eleven patients of the 15 treated in this way were entirely cured, the main point being early recognition of the trouble, with prompt operation before peritonitis has had time to develop. He operated in from 2½ to 26 hours after the perforation. It is important, he adds, to impress on ulcer patients the possibility of perforation at any moment and the necessity for immediate operation. One man thus warned felt the perforation while in the street and took a cab at once for the hospital where the operation was done within an hour with the best results.

86. **Unusual Cases of Permanent Retention of Urine.**—In the first of Casper's two cases the trouble was evidently senile changes in the outer muscular layer of the bladder commanding the expulsion of the urine. The patient was a man of 60 and the only relief was by introduction of a retention catheter which he has worn uninterruptedly for 8 years. He urinates 8 times a day by removing the plug in the catheter, and twice a day rinses out the bladder to keep the inevitable cystitis within bounds. A new catheter is introduced every 6 or 8 weeks. By this means the patient is kept free from disturbances and attends to his business with practically no

inconvenience from his condition. In the second case the discovery of partial atrophy of the skin suggested that the retention of urine might be the result of a process of atrophy in the bladder, which proved to be the case. The changes observed in various muscles indicate trophoneurotic disturbances, coordinated processes of atrophy involving various organs. This patient is a man of 34 who has been unable to empty his bladder spontaneously for 6 years, but is doing well with the retention catheter, although a papilloma has developed where the crosspiece of the retention catheter rests on the bladder wall, but it causes no disturbances to date.

87. **Intraneural Injections in Treatment of Neuralgia.**—Wiener has treated 75 patients with long chronic sciatica by intraneural injection of chilled salt solution. He has never observed any injurious action but has been impressed with the benefit in certain cases as also in a case of the lancinating pains of tabes. No permanent benefit is derived unless the needle reaches the nerve, evidenced by the sudden intense pain extending down into the toes. He has injected 25 c.c. of the fluid in 26 cases of trigeminal neuralgia, injecting the fluid at the emerging point of the nerve; 2 of the patients were improved and 22 cured, also 5 other patients with neuralgic headache and 3 with lumbago. Immediate relief of the pain is most striking if the injection has been made strictly intraneural. The fever sometimes observed is due to the salt in the solution, and lately he has been avoiding this toxic action by using a mixture of 6 parts salt and 0.75 part calcium chlorid to 1,000 parts water; this secures the neutralizing action of the calcium chlorid on the salt so that there is no rise in temperature.

88. **Origin of Gastroptosis.**—Bönniger discusses the origin of the unusually long stomach which he ascribes to an abnormal mode of development of the body as a whole, the stomach growing downward where it has more space for development. The long stomach is comparatively rare in men, and he ascribes it to the lack of exercise among girls, and urges hygienic measures to prevent its development. Once developed nothing can be done to shorten the stomach, but it can be supported better by developing the muscles by gymnastic exercises. His statements are based on examination of 300 persons free from stomach disturbances, the connection between the shape of the stomach and the shape of the trunk being unmistakable. Gastroptosis in the true sense of the term, he declares, may occur from sliding down of the stomach as a whole from relaxation of its supports or lack of support from the intestines below.

Correspondenz-Blatt für Schweizer Aerzte, Basel

March 10, XL, No. 8, pp. 209-240

91 *Prophylaxis and Non-Operative Treatment of Appendicitis. O. Fiertz.

March 20, No. 9, pp. 241-288

92 Rational Treatment and Prophylaxis of Acute Tonsillitis. A. Schönemann.
93 *Retention of Fluid Simulating Obesity. (Durch Flüssigkeitsretention vorgetäuschte Obesitas.) E. Bernoulli.
94 *The Obligation to Professional Secrecy on the Part of the Physician. (Schweigepflicht des Arztes.) A. Jaquet.

91. **Prevention of Appendicitis.**—Fiertz explains the increasing prevalence of appendicitis as due to the change in the habits of city people. Instead of attending all day to household duties, women sit at work or sit at theaters or clubs long hours at a time, neglecting the calls of Nature and suppressing the desires. Sedentary occupations are becoming more common among men, and there is less opportunity and time to heed Nature's calls. The result is an increasing tendency to constipation, and this is responsible for the appendicitis. He ascribes the fatalities after appendectomy to the continuance of intoxication from putrefying matters in the intestines still left after the operation, while, he declares, thorough evacuation of the intestines would have answered the purpose without the operation, or at least would have usefully supplemented it. In 51 cases of acute appendicitis a prompt cure was realized by keeping the patients absolutely still in bed and giving a rectal injection of a glass of a 1 per thousand solution of salicylic acid, mixed with a glass of oil, the receptacle held as high as possible; then a quart of the salicylic solution is poured into the receptacle and allowed to flow slowly into the rectum. This is repeated once or twice a day and the patient not allowed to move. The injections must be given by an expert, possibly by the physician himself. Moist heat is then applied to the abdomen, and if necessary opium is given to relieve the pains. Perforation occurred in 12 of his cases, but under this treatment it was rapidly followed by encapsulation and the ultimate outcome was excellent in every case. Any foreign body in the appendix found its way through the perforation and passed off harmlessly. Twelve of the patients were between 5 and 10 years old and 17 between 20 and 30, and all have been under observation for years since, confirming the advantages of this oil and water medical treatment during the acute phase. Appendectomy later is a much less serious operation if deemed necessary, which he accepts in case the patient expects to live remote from hospital privileges. He adds that children should be trained to utilize the peristaltic movements that follow a meal to insure regular defecation at the same time each day. They can seldom spare the time for it in the morning.

93. **Obesity Simulated by Retention of Fluid.**—Bernoulli reports the case of a young woman with a nervous taint whose weight fluctuated remarkably at times independently of the amount of food consumed. The difference was evidently due to retention of fluid, though there was no actual edema, and displayed unmistakable connection with emotional stress and the onset of the menses. The metabolic findings are given in detail on various diets with or without thyroid treatment and abstention from salt, and the case is compared with somewhat similar ones in the literature. Between morning and night the patient's waist and bust measure would sometimes increase so that she was unable to get into her clothes. No permanent benefit was derived from the treatment instituted, although transient improvement followed each time.

94. **Professional Secrecy.**—The ordinances at Basel, Switzerland, require that any public official learning of any crime by virtue of his office must report it to the authorities. The physician in charge of the public hospital there recently enquired of the authorities whether this applied to cases of criminal abortion of which the medical force of the hospital may learn in treating the patients in their charge. If the medical men comply with the law and denounce the crime, women seeking relief after abortion will avoid the hospital and trust exclusively to quacks and others on whose discretion they think they can count. The authorities have been reconsidering the ordinance in consequence, and an expert opinion on the subject was asked of the local medical society. Jaquet's article was presented at a recent meeting to open the debate on the subject. He reviews the laws in regard to privileged communications in various European countries, presenting an able summary of legal decisions and the opinions of leading medical men. The tendency of his conclusions is in the line of still greater reticence on the part of the physician even when the interested parties release him from the professional obligation of secrecy. The physician alone can be the judge as to the propriety of revealing what he has learned in the practice of his profession and no one can foretell the far-reaching consequences of disregard of professional secrecy in any given instance. The confidences of the patients in a public hospital should be respected just as in private practice. He comments on the general lack of appreciation among the public of the physician's attitude in respect to professional reticence. No one seems to think he is committing an indiscretion to enquire of a physician in regard to the diagnosis and prognosis of some patient in his charge. The laity seem to think that the physician can chat in regard to his patients without restriction so long as a non-venereal or non-mental affection is in question, and even in the latter case they do not hesitate to enquire at times. Jaquet remarks that it is not uncommon for patients to give a wrong address or name or beg that their family physician should not be informed, fearing that outsiders may learn what they wish to conceal. In one case he directed a patient to go to a certain specialist but the patient refused, saying, "I will not go to Dr. X.; he tells everything." The advantage of a legal recognition of the privileged communication is obvious as both physicians and public are reminded constantly by it of their mutual obligations and privileges. The physician when questioned can refer to the law, while the public, on the other hand, gains greater con-

fidence in the profession. Jaquet cites a number of instances to show the evil effects of a lack of reticence, as for example when a family physician warned a wife that her husband had recently acquired syphilis. The wife nearly became insane, the home was wrecked and—she blamed the physician for all the trouble. With thoughtfulness and tact, the desired results can nearly always be accomplished without breach of professional secrecy. For instance, if a father before the marriage of his daughter consults a physician in regard to the health of the son-in-law-elect, the physician may advise the father to stipulate that the young man must take out a life-insurance policy. If the applicant is rejected, the father can draw his own conclusions. When young people hesitate to inform their parents of disease, the physician should urge them to confide in the parents as this is usually the only way to ensure suitable and systematic treatment, or the physician may offer to make the confession in the name of the young patient; his experience and tact may render the communication much less of a shock for the parents. Brouardel found this course to have many advantages in his experience as medical adviser of a large preparatory school at Paris. The French are particularly stringent in regard to professional secrecy; one of their writers says that no one is sure enough of himself to put his conscience in the place of the law. The conception of circumstances requiring the "justifiable defense of the community" should be acted on only as the very last resort. At the same time, Jaquet regards it as the duty of the physician to denounce to the authorities cases in which children, neglected by their parents or the latter consenting, are being sacrificed to immoral purposes. The Swiss law imposes a penalty on servants, employees, etc., for willfully concealing the existence of contagious disease and thus imperiling the health of the family, other factory hands, etc. By insisting on this law the physician can usually persuade the one affected to inform his employer himself.

Deutsche medizinische Wochenschrift, Berlin

March 17, XXXVI, No. 11, pp. 489-544

95 *Electric Cauterization. (Ueber Operationen mit dem elektrischen Lichtbogen und Diathermie.) V. Czerny.
96 Segmental Diagnosis of Spinal Cord Lesions. (Kasuistische Beiträge zur Segmentdiagnose des Rückenmarks.) F. Engels.
97 Pityriasis Capitis as a Factor in Baldness. (Ueber Pityriasis capitis und ihre Bedeutung für den Haarausfall.) K. Herzheimer.
98 Case of Typhoid plus Colon Bacillus Infection and Colon Bacillus Pneumonia. G. Kiralyfi.
99 [illegible] in for Diphtheria Bacilli. P. Sommerfeld.
100 *[illegible] esponse to Wassermann Reaction after G. Wolfsohn.
101 [illegible] of the Wassermann Reaction. R. W. König.
102 *Mishap after Scopolamin-Morphin-Chloroform Anesthesia. J. Faust.
103 Management of Narrow Pelvis in General Practice. (Die Reformen in der Therapie des engen Beckens und die Praxis.) F. A. Scheffzek.

95. **Deep Electric Cauterization and Thermopenetration in Cancer.**—Czerny has made extensive application of fulguration, Arsonvalization and other methods of deep intensive electrocauterization and reports his experiences in 61 cases of cancer. The methods to date do not insure against recurrence more than the procedures hitherto in vogue, but he urges further work in this line, believing that it may be possible by electric means to affect cancer germs in the depths to such an extent as to inhibit their growth and thus enable the organism to gain the upper hand over them, with possibly some assistance from without to enhance the natural defensive processes.

100. **The Wassermann Reaction Changed After General Anesthesia.**—Wolfsohn applied the Wassermann test to the serum of a patient just before an operation and by chance again after the operation. The findings with the test were entirely negative with the first specimen of serum but with the second specimen there was a pronounced positive reaction. He then examined the serum from 50 other patients immediately after general anesthesia and obtained a pronounced positive reaction in 13 cases, in 11 of which syphilis could be positively excluded. The anesthesia was induced with a combination of veronal, morphin, scopolamin and ether and he warns that the findings in the serum after general anesthesia must not be accepted as conclusive in regard to the presence of syphilis.

102. **Mishap from Scopolamin-Morphin Anesthesia.**—Faust's patient was a robust youth of 17 and an hour after appendectomy there was spasmodic contraction of the throat musculature with extreme cyanosis. Artificial respiration was impossible and the spasm suddenly subsided spontaneously but soon recurred. This was repeated about six times, the attacks growing milder until by the end of the hour the patient was out of danger. Faust ascribes the spasm to the scopolamin and remarks that the frantic measures to restore respiration, kept up for over an hour, did not seem to disturb the healing of the wound which he says suggests that patients may safely be allowed to get up earlier than is now the rule.

Deutsche Zeitschrift für Chirurgie, Leipsic

February, CIV, Nos. 1-2, pp. 1-208

104 *Surgery of Liver and Bile Ducts. (Zur Chirurgie der Leber und der Gallenwege.) A. Jenckel.
105 *Acute Hemorrhagic Pancreatitis Cured by Prompt Operation. L. Imfeld.
106 Perineal Prostatectomy with Lateral Incision. M. Wilms.
107 Cholangitic Liver Abscess (Zur Kenntnis der cholangitischen Leberabszesse.) S. Schönberg.
108 Absorption of Lead from Retained Bullets. (Bleiresorption aus steckengebliebenen Projektilen.) Wieting and I. Effendi.
109 Injury of the Diaphragm and Operative Treatment. (Ueber Zwerchfellverletzungen und ihre operative Behandlung.) W. Wolf
110 *Carcinoma of Face and Scalp. (Zur Statistik der Carcinome des Gesichtes und der behaarten Kopfhaut.) G. Marassovich.

104. **Gall-Stone Operations.**—Jenckel reviews the operations on the biliary apparatus since his previous reports at the surgical clinic at Göttingen in charge of Braun, the total now amounting to 230 in the course of 13 years. The series is unique in the fact that all but 2 of the patients have been traced to date, so that the ultimate outcome is known in all but these 2. Cholecystectomy gave the best final results.

105. **Acute Hemorrhagic Pancreatitis.**—The patient in the case reported was a mechanic of 36. The first symptoms were repeated vomiting and pain in the stomach region, yet he was able to continue at work for a week. Then symptoms developed suggesting ileus but closer examination differentiated acute pancreatitis, and the capsule was slit for 3 or 4 cm. and a Mikulicz tampon applied directly to the pancreas. The abdomen was sutured around this and a glass drain, and after expulsion of a few sequesters of pancreas tissue the patient made a smooth recovery. The case permitted considerable research on the functioning of the pancreas as the fistula did not heal for about four months and numerous tests were made.

110. **Carcinoma of the Face and Scalp.**—Marassovich gives an analytic study of 182 cases of this kind during the last 8 years at the surgical clinic at Vienna in charge of Hochenegg. The list includes 80 women. In 3 cases the patients were between 24 and 30; in 7 between 30 and 40; the others were older. The first symptom of trouble had been noticed from 4 weeks to 20 years before the patients applied for relief. In 4 cases the cancer had developed on lupus. In 26 cases the cancer on the face was multiple; in 2 there was cancer elsewhere. In 3 cases a family tendency was unmistakable.

Medizinische Klinik, Berlin

March 13, VI, No. 11, pp. 411-450

111 Antistreptococcus Serotherapy in Staphylococcus Sepsis. H. [illegible]
112 *Sp[illegible] of Tuberculosis in Children. [illegible]
113 Wh[illegible] N. P. Tendeloo.
114 *Sudden Death at Spas. (Ueber plötzliche Todesfälle in den Kurorten.) [illegible]
115 Technic and [illegible] Exercises in Bronchial Asthma. ([illegible] n Bronchialasthma.) L. Hofbauer.
116 Differentiation of Natural and Artificial Honey by Fixation of Complement. (Zur Frage der Differenzierung von Natur- und Kunsthonig auf biologischem Wege.) A. Schutze.

112. **Diagnosis and Treatment of Tuberculosis in Children.**—Engel remarks that active pulmonary tuberculosis is often diagnosed in children when it is not present. Dulness and changes in expiration are frequent in children but do not always indicate an apical process. The extent of a tuberculous process is revealed by the rapidity of the response to the tuberculin test and by the delay before tolerance to a larger dose is realized. Most significant is the behavior of the temperature during the repeated application of the same dose at

one-day intervals. Repeatedly recurring reaction to a small dose indicates an extensive lesion. A positive reaction with a dubious process does not always indicate that the process in question is tuberculous; there may be some latent process in some gland, while the manifest lesion may be of another character. The decision here depends on the local reaction that is observed even with a dose too small to affect the temperature. He urges that servants, etc., should be examined for tuberculosis before being engaged, while the medical school inspectors should guard the children by removing sources of contagion in teachers and schoolmates. If a tuberculous process is discovered or is revealed by a tuberculin reaction, the child should be given the benefit of systematic treatment, even though apparently healthy. This is all the more important the younger the child. After the age of 6, occult tuberculosis may not require such intensive treatment but it should never be neglected. The climate is of the greatest importance, but he warns that children should not be sent to the seashore, etc., merely with the parents or attendants; they require sanatorium care. Tuberculin treatment is particularly easy in the case of children as they have only a slight susceptibility and do not require the extensive courses of adults. Children adapt themselves readily to the tuberculin but the malignancy of pulmonary tuberculosis in a child renders tuberculin treatment of little use for this. The effect of tuberculin treatment, he asserts, is most pronounced with bone and joint tuberculous affections.

114. **Sudden Deaths at Health Resorts.**—Kisch has compared the autopsy findings with the clinical history in 156 cases of sudden death. The liability to a sudden fatality in persons with heart disease increases with age; under 30 sudden death is no more frequent than in persons with sound hearts. After 50, patients with cardiovascular disease should reckon with sudden death as a possible contingency, especially when there is a tendency to lipomatosis or general arteriosclerosis. Of especially bad omen is the coincidence of mitral insufficiency with endarteritis and insufficiency of the aorta when examination reveals advanced fatty degeneration of the myocardium and considerable dilatation of the left ventricle. This combination of mitral and aortic insufficiency was evident in 15 per cent. of his cases. The combination of pulmonary emphysema with the heart disease is also liable to entail sudden death. With heart disease even the most apparently harmless cause may bring on the fatality, especially emotions or anything that raises the blood pressure. He warns most seriously against the practice of allowing the sick at a watering place to take the baths, exercises, etc., without medical advice, citing several striking cases from his experience at Marienbad. Among them was that of a man of 46 who drank several glasses of mineral water immediately on arriving after a long journey and dropped dead. A letter from his home physician later stated that he had an incompensated cardiac defect. Kisch always impresses on the patient with heart disease that the most serious results may follow failure to comply with the medical directions in regard to drinking, bathing, eating and exercising, and he warns the family of the possibility of a sudden fatality. He even pleads to have the baths and other "cure" measures only accessible on a medical order, or at least that the authorities should post placards urgently advising the guests not to take the "cure" or any part of it without medical advice. The number of persons with heart disease who visit the spas is constantly increasing while the measures are becoming more complicated, and such two-edged swords are best wielded by the physician. In conclusion Kisch urges careful records of sudden death in the watering places and, in addition, extensive autopsy.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

March, XXXI, No. 3, pp. 275-414

117 Local Defensive Reaction to Irritation; Absorption of Fat in the Ovary and Omentum. K. Ulesko-Stroganowa.
118 Management of Mentoposterior Face Presentation. (Zur Behandlung der Mentoposterioren Gesichtslage.) F. Unterberger.
119 *Treatment of Uterine Myomas. A. Troell.
120 Metastatic Ovarian Carcinoma. F. Cohn.
121 *Inheritance of Syphilis. (Zur Lehre von der Vererbung der Syphilis). O. Frankl. Commenced in No. 2.
122 Recent Research on Ergot. (Ergebnisse der neueren Mutterkornforschung.) A. [illegible]ennecke.

119. **Treatment of Uterine Myoma.**—Troell gives tabulated details of 100 cases of uterine myoma, supplementing a previous series of 105 cases, being 52.03 per cent. of the total 394 myoma cases at the clinic for women's diseases at Lund. In 9 cases simultaneous malignant disease was discovered in the uterus. The ultimate outcome in the total 205 cases speaks in favor of *supravaginal amputation* as the results are equally good as those of hysterectomy while it is a much less serious operation. The myoma recurred in 22.2 per cent. of the 18 cases in which it was merely enucleated or resected. The 2 fatal cases of pulmonary embolism in his experience occurred after hysterectomy, and the fatality in another case was the result of injury of the bladder during a hysterectomy. In one of the fatal embolism cases the operation had been done during the menses, in the other after excessive loss of blood.

121. **Inheritance of Syphilis.**—Frankl reviews the experiences in this line at the clinic in charge of Schauta at Vienna. These do not indicate that *it is wise to institute mercurial treatment* of apparently sound women on the basis of a positive seroreaction alone unless the woman has given birth to a syphilitic child. In this case she evidently has latent infection and specific treatment is required without waiting for further manifestations of the disease. On the other hand, a positive reaction in the child, although it may be apparently healthy, should indicate specific treatment. If the child with inherited taint shows no signs of syphilis and gives a negative seroreaction, it might be well to wait for some manifestations on its part, commencing mercurial treatment at the first signs of "snuffles," or if the seroreaction becomes positive on repeated tests. This may result in some child escaping specific treatment who should have had it, but, on the other hand, it is not a pleasant idea for the physician to find that he has inflicted on a sound child an unnecessary and by no means *entirely harmless course of mercurial treatment.* The details of 87 cases are summarized.

Münchener medizinische Wochenschrift

March 8, LVII, No. 10, pp. 505-560

123 Muscle Hernia. (Ueber Muskelhernien.) E. Lexer and H. Haus.
124 Easy Technic for Diagnosis of Syphilis by Wassermann Reaction. (Wie kann der Arzt die Wassermannsche Reaktion ohne Vorkenntnisse leicht vornehmen?) E. v. Dungern.
125 *Heart Disease and Psychoses. (Herzkrankheit und Psychose.) L. Saathoff.
126 *Clinical Picture of Infantilism and Hypoplasia. A. Mayer.
127 *Connection between Dysmenorrhea and Tuberculosis. E. Gräfenberg.
128 Fracture of Fifth Lumbar Vertebra from Lifting. (Zur Kenntnis des Verhebungsbruches am 5. Lendenwirbel.) Delorme.
129 Immunization against Acute Poliomyelitis. (Ueber Immunität und Immunisierung gegen das Virus der epidemischen Kinderlähmung.) P. H. Römer and K. Joseph.
130 *Congenital Absence of Pericardium. (Zur Klinik der Herzbeuteldefekte.) E. Ebstein.
131 Substitutes for Cocain in Rhinology and Laryngology. (Haben sich in der Rhino-Laryngologie die Ersatzmittel des Kokain bewährt?) M. Senator.
132 Apparatus for Electrocardiography. (Universal-Registrier-Apparat Modell Bock-Thoma.) H. Bock.
133 Medical Course in Obstetrics. (Das geburtshilfliche Seminar und die geburtshilflich seminaristischen Uebungen.) G. Leopold.
134 *Professional Secrecy and Venereal Disease. (Aerztliches Berufsgeheimnis und Geschlechtskrankheiten.) Hecht.

125. **Heart Disease and Psychoses.**—Saathoff reports three cases showing that syphilitics with failing compensation are liable to present mental symptoms from the disturbances in the circulation in the brain injured by the constitutional syphilis. The psychosis in his cases was a kind of distressed confusion, hallucinations and motor agitation. The autopsy findings are given in each case; the brain showed traces of atrophy with secondary hydrocephalus. Conditions are somewhat similar in these cases to alcohol delirium; injuries which pass without a reaction on the part of a normal brain may induce a typical psychosis. Saathoff reviews the literature on the subject of the connection between aortic aneurisms and other circulatory affections and insanity.

126. **Clinical Picture of Infantilism and Hypoplasia.**—Mayer remarks that in these days of insurance against disability, it is important to study the cases of congenital disability, and he reviews the various types of infantilism and hypoplasia as affecting various organs. Besides corporal anomalies there are

often psychiatric and neurologic abnormal conditions. In 60 cases of infantilism he noticed evidences of morbid conditions in the nervous system in 20 cases. The frequent combination of exophthalmic goiter with anomalies closely allied with defective development, such as chlorosis, inherited syphilis, tuberculosis, persisting thymus and adenoids sustains, he asserts, the assumption of a congenital physical inferiority as a factor in the Basedow syndrome. This seems the more reasonable, he believes, as the tendency to exophthalmic goiter and to the nervous and mental symptoms observed with it seems to be congenital. It is especially significant that the disturbance underlying the Basedow syndrome is in the thyroid, which has such an important influence on the general development and is evidently closely connected with the functions of the female genitalia, and is also involved in infantilism. Exophthalmic goiter, he says, is often associated with hypoplasia in the genitalia.

127. **Dysmenorrhea and Tuberculosis.**—Gräfenberg's experience confirms the assumption that dysmenorrhea has an underlying tuberculous infection as a factor in many cases. Eisenstein reported a year or two ago that 118 women with menstrual disturbances gave a positive reaction to a subcutaneous injection of tuberculin, although there was nothing else to suggest tuberculosis. Gräfenberg found in 3 cases tuberculous lesions at autopsy of young women who had been treated for dysmenorrhea. In another case of the kind the severe abdominal pain compelled laparotomy, which revealed advanced tuberculous lesions in the pelvic organs. Pfannenstiel has reported a case in which rapid miliary tuberculosis in the abdomen followed laminaria dilatation of the cervix done for dysmenorrhea; the patient was an apparently healthy young woman. Gräfenberg obtained a positive response to the tuberculin test in 21 of 30 patients who had applied for relief from primary dysmenorrhea. The response was always negative in the cases of secondary dysmenorrhea. With the primary form the genitalia are always defectively developed. In 11 cases there was also a local reaction in the genitalia. These findings suggest that the defective development of the genital organs was the consequence of some tuberculous process in the pelvic organs during childhood, this process possibly healing. The menstrual hyperemia induces the dysmenorrheic disturbances in the imperfectly developed genital organs. A system of organs already the site of a tuberculous process and consequently defectively developed, is much more liable to new disease than a sound organ. He concludes from his research and experiences that tuberculin treatment may prove successful when primary dysmenorrhea is accompanied by a local reaction to tuberculin. In 6 cases he has obtained most excellent results by this means, the dysmenorrhea and other pelvic symptoms subsiding, the general health improving and the weight increasing. He gives the tuberculin injection twice a week. In conclusion he warns against the slightest local intervention with primary dysmenorrhea as liable to arouse a latent general tuberculosis. This danger is especially imminent when the tubercle bacilli are in the circulating blood; curetting the uterus or even an insignificant local measure might lead them to settle at this point.

130. **Congenital Absence of the Pericardium.**—Ebstein reports a case in which the patient, a young woman, seemed to be healthy after an attack of typhoid, followed by what was diagnosed as a post-infectious myocarditis, but autopsy a few months later, the patient having died from acute potassium cyanid poisoning, revealed that the pericardium was missing. He has found records of 31 other cases of missing pericardium and reviews the clinical picture, which resembles in many respects that of movable heart.

134. **Professional Secrecy and Venereal Disease.**—Hecht recently had occasion to operate for a nasal affection on a patient and found later that the patient was under treatment at the same time for recent syphilis, in the charge of a local dermatologist. He reproached the patient for not informing him of his recent syphilis, but the latter declared that the dermatologist had consented to the operation. Hecht then reproached the specialist who said that he had told the patient to warn the operator, and declared that he had no right to warn the latter himself. Hecht discusses the arguments on this question of secrecy and the prophylaxis of venereal disease and suggests the following two topics for discussion in medical societies: 1. Is it the ethical duty of a physician to warn the surgeon or dentist who is to undertake an operation on a patient with recent syphilis in his charge? 2. Is it the duty of the physician to seek for the source of the infection when a patient with recent syphilis applies to him? Is it the duty of the physician to ascertain whether the infecting person is already receiving appropriate treatment, and if not, to take measures to insure this and close this source of infection?

Wiener klinische Wochenschrift, Vienna

March 17, XXIII, No. 11, pp. 386-424

135 *Serum Anaphylaxis in Guinea-Pigs. (Experimentelle Studien über Anaphylaxie. III.) A. Biedl and R. Kraus.
136 *Treatment of Obesity. (Behandlung der Adipositas.) K. F. Wagner.
137 *In[illegible] Connection with Kidney Func[illegible] und Nierenfunktion.) R.
138 *Research on [illegible] Action of Radium. (Zur genaueren Kenntnis der Radiosensibilität. II.) G. Schwarz.
139 *Carlsbad Waters in Treatment of Epilepsy. E. Biernacki.

135. **Experimental Study on Anaphylaxis.**—Biedl and Kraus have continued their research on serum anaphylaxis in guinea-pigs and here report spasmodic contraction of the bronchial musculature, entailing acute swelling and rigidity of the lung, as one manifestation of the induced anaphylaxis, the phenomena resembling remarkably the acute attack of bronchial asthma in man.

136. **Treatment of Obesity.**—Wagner classifies acquired obesity as A, due to immoderate eating, or lack of exercise or both; B, obesity due to abnormal functioning of glands with an internal secretion; and C, obesity from spontaneous anomalies in the cellular metabolism. The inherited form, A, is due to constitutional weakness of the functioning of the glands with an internal secretion; B, is due to inheritance of spontaneous anomalies in cellular metabolism. Treatment based on this classification has given excellent results in his hands, especially on the assumption of defective thyroid functioning. His list includes 149 cases of obesity during the nine years before 1908. Thyroid treatment proved more or less effectual in every instance, especially when alternated with mineral water. The ages of the patients ranged from 10 to 70; his principle is to give small doses 2 or 3 times a day. The maximal dose is about half of a moderate sized gland. Slight symptoms of intolerance were observed in 17 cases, the treatment being suspended at the first sign of it, this first sign being generally "tired eyes."

137. **Coagulating Time and Kidney Functioning.**—Bachrach has been investigating the cryoscopic urine and blood findings in connection with the time required for the blood to clot. His findings seem to demonstrate that the interval before clotting is dependent on the concentration of the blood, as he describes in detail.

138. **Application of Radium Under Suction.**—Schwarz reports experiences which seem to contradict what has previously been learned in regard to the action of radium. Applied to the arm under a suction bell, the reaction to the radium rays occurred more rapidly but was at the same time much milder and more transient.

139. *Carlsbad Waters in Treatment of Epilepsy.*—Biernacker refers to several cases in which a course of Carlsbad waters for gastrointestinal disturbances seemed to have a favorable influence on long-existing epilepsy. The results were so good that he urges prescribing a course at Carlsbad as a routine measure for certain patients with epilepsy, especially those in whom migraine accompanies or substitutes the epileptic seizures or those with some metabolic disturbances, uric acid diathesis with oxalate stones in the urine and pain in the joints and limbs. It was in such cases that the results were most striking.

Zentralblatt für Chirurgie, Leipsic

March 19, XXXVII, No. 12, pp. 433-464

140 Deformity of the Ankle from Congenital Malposition of the Fibula. (Die Volkmann'sche Sprunggelenksdeformität als Folge angeborener fehlerhafter Lage der Fibula.) J. G. Chrysospathes.
141 Excision of Free Bodies in Joints. (*Zur Exzision von freien* Gelenkkörpern.) E. E. Goldmann.

Zentralblatt für Gynäkologie, Leipsic

March 19, XXXIV, No. 12, pp. 401-432

142 Differentiation of Hemolytic Streptococci by Cultivation in Lecithin Bouillon. F. Fromme.
143 Extramedian Abdominal Incision. (Ueber einen verbesserten extramedianen Bauchdeckenschnitt bei Kölliotomien.) A. Gubaroff.
144 The Eclampsia Problem. (Bemerkung zum Artikel von Dr. Alsberg in Nr. 1, ds. Jhrg.) J. Hofbauer.

Zentralblatt für innere Medizin, Leipsic

March 19, XXXI, No. 12, pp. 297-320

145 *Selection of Patients for Public Tuberculosis Sanatorium Treatment. (Kritische Bemerkungen zur Auslese von Lungenheilstättenpatienten.) Ziekgraf.

145. **Selection of Patients for Tuberculosis Sanatorium Treatment.**—Ziekgraf is in charge of a tuberculosis station where the patients are under observation for a time for more exact diagnosis of the presence and stage of their tuberculosis before being sent to the public sanatorium. When a patient gives a negative reaction to a subcutaneous injection of 10 mg. tuberculin, he regards this as excluding tuberculosis. He has encountered 110 such cases in his experience with 1,200 applicants. The anamnesis is of the slightest importance for the diagnosis, especially coughing up blood; persons are often deceived by blood from the nose or gums, and it is possible for blood to be coughed up even in the absence of tuberculous lesions. These 110 patients who thought they had tuberculosis required rest and were given a course of tonics, etc., as most of them were neurasthenics. The German laboring classes regard a free course in a sanatorium as something very desirable, and they exaggerate, he says, if necessary to obtain it, so that these observation stations and injection of tuberculin up to 10 mg. are proving valuable aids in eliminating those not needing specific treatment.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 8, XXXI, No. 29, pp. 305-312

146 *Efficacy of Camphoric Acid in Treatment of Sweats in Tuberculosis. (I sudori profusi nella tubercolosi polmonare.) E. Levi.

March 10, No. 30, pp. 313-320

147 Efficacy of Camphor Bromid in Chorea. (Due casi di corea di Sydenham guariti col bromuro di canfora.) G. Ghetti.

146. **Camphoric Acid in Treatment of Sweats in Tuberculosis.**—E. Levi reports 20 cases to demonstrate the efficacy of camphoric acid in treatment of the sweats in phthisis. He gives 2 gm. (30 grains) in two doses during the day or evening, and found it effectual in many cases in which all other measures had failed to relieve. The sweats are probably due to a number of factors acting on the centers for respiration and transpiration, and the camphoric acid seems to influence them all while it is well borne and causes no symptoms of intoxication. He kept up this treatment until the sweats entirely disappeared. Camphorated alcohol rubbed into the skin is also useful, he states, in aiding the effect with other drugs, but their combined action is far less powerful than the camphoric acid alone.

Policlinico, Rome

March 20, XVII, No. 12, pp. 355-380

148 Experimental Research on Production of Cartilage in Healing of Fractures. R. Meriani.
149 Treatment of Puerperal Fever by Intravenous Injections of Mercuric Chlorid. V. Forli.
150 Infantile Splenic Anemia from Leishmann Parasites. (Kala-azar?) G. Donzello.
151 Two Cases of Lipoma in the Mesentery. A. Giampaoli.

Riforma Medica, Naples

March 7, XXVI, No. 10, pp. 253-280

152 *Blood Findings in Animals Long Given Small Doses of Quinin. (Ricerche sul sangue degli animali sottoposti a piccole e ripetute dosi di chinina.) D. De Sandro.
153 Calculus in Diverticulum in the Urethra. A. Reggianini.

152. **Influence on the Blood of Long-Continued Small Doses of Quinin.**—The tabulated details of extensive research in this line on dogs at Rummo's medical clinic at Naples demonstrate, DeSandro asserts, that small doses of quinin have a favorable effect on the blood even when long continued. The proportion of hemoglobin increased in the dogs, as also the number of red corpuscles and an active leucocytosis of polynucleated cells was observed. The daily dose of quinin approximated 0.4 gm. for each 70 kilograms of weight (about 6 grains to 154 pounds of weight); this is the dose generally given by the mouth in the prophylaxis of malaria. It was injected subcutaneously into the dogs. When the daily dose surpassed this an injurious influence on the blood was soon apparent.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

The Optic Nerve and the Accessory Sinuses of the Nose. A Contribution to the Study of Canalicular Neuritis and Atrophy of the Optic Nerve of Nasal Origin. By Prof. A. Onodi of the University of Budapest, Member of the Hungarian Academy of Sciences. Authorized Translation by J. Luckhoff, M.D. Cloth. Price, $3.50 net. Pp. 101, with 50 illustrations. New York: William Wood & Co., 1910.

Die forensische Blutuntersuchung. Ein Leitfaden für Studierende, beamtete und sachverständige Aerzte und für Kriminalisten. Von Dr. Otto Leers, Assistent der königlichen Unterrichtanstalt für Staatsarzneikunde an der Universität Berlin. Paper. Price, 6 marks. Pp. 212, with illustrations. Berlin: Verlag von Julius Springer, 1910.

Epidemic Pol. [illegible] and Mental Disease Monograph Series No. [illegible] New York Epidemic of 1907. By Collective Inv [illegible] Paper. Price, $2. Pp. 119, with 14 illustrations. New York: The Journal of Nervous and Mental Disease Publishing Co., 1910.

The Fifth Report of the Cancer Commission of Harvard University. (Founded by Caroline Brewer Croft, June 16, 1899). Formerly the Caroline Brewer Croft Fund Cancer Commission. Paper. Pp. 297, with illustrations. Boston: The Medical School of Harvard University, 1909.

Medicine in the Colonies. By William S. Wadsworth, M.D. A Paper Read before the Pennsylvania Society of the Order of the Founders and Patriots of America. [Secretary, T. A. Van Dyke, Jr., Union League Club, Philadelphia.] Jan. 14, 1910. Paper. Pp. 16.

A Course of Lectures on Tumors Given Under the Auspices of the Cancer Commission of Harvard University. (Founded by Caroline Brewer Croft, June 16, 1899). Paper. Pp. 80, with illustrations. Boston: Medical School of Harvard University, 1909.

Practice of Osteopathy. Its Practical Application to the Various Diseases of the Human Body. By Charles H. Murray, A.B., Author of "Genuine Osteopathy," etc. Half Morocco. Price, $3.50. Cloth, $2.50. Pp. 338, with 107 illustrations. Elgin. Ill., 1909.

Die Procto-Sigmoscopie und ihre Bedeutung für die Diagnostik und Therapie der Krankheiten des Rektum und der Flexura sigmoidea. Von Dr. H. Strauss in Berlin. Cloth. Price, 7.50 marks. Pp. 149, with illustrations. Leipzig: G. Thieme, 1910.

La Tension artérielle en clinique. Sa Mesure: Sa Valeur Séméiologique. Par le docteur Louis Gallavardin, Médecin des Hôpitaux de Lyon. Paper. Price, 4 francs. Pp. 206, with 70 illustrations. Paris: G. Steinheil, 2, rue Casimir-Delavigne, 1910.

Nervous States, Their Nature and Causes. By Paul Dubois, M.D., Professor of Neuropathology at the University of Berne. Authorized Translation by Edward G. Richards. Cloth. Price, 75 cents. Pp. 101. New York: Funk & Wagnalls Co., 1910.

Transactions of the Connecticut Homeopathic Medical Society. Organized 1851. [illegible] -ninth Annual Meeting, New Haven, May 1 [illegible] New Britain, Oct. 19, 1909. Paper. Pp. [illegible]

Annual Report of Vassar Brothers' Hospital, Reade Place, Poughkeepsie, N. Y. Founded by Matthew Vassar, Jr., and John Guy Vassar. Incorporated June, 1882. March 1, 1909, to March 1, 1910. Paper. Pp. 28.

Twenty-eighth Annual Report of the State Hospital for the Insane at Warren, Pa. For the Year Ending Nov. 30, 1909. To the Board of Commissioners of Public Charities. Paper. Pp. 129, with illustrations.

Forty-fourth Annual Report of St. Francis' Hospital. East 142d Street, New York City. Under the Charge of the Sisters of the Poor of St. Francis. For the Year 1909. Paper. Pp. 39, with illustrations.

The International Medical Annual. A Year-Book of Treatment and Practitioner's Index. Twenty-Eighth Year, 1910. Cloth. Price, $3.50. Pp. 762, with 108 illustrations. New York: E. B. Treat & Co.

An Outline of Individual Study. By G. E. Partridge, Ph.D., Formerly Lecturer in Clark University. Cloth. Price, $1.25 net. Pp. 240. New York: Sturgis & Walton Co., 1910.

An Account by the Milk and Baby Hygiene Association to March 1, 1910. Paper. Price, 15 cents. Pp. 37, with illustrations. Boston: Milk and Baby Hygiene Association.

Report of the Commissioner of Education for the Year Ended June 30, 1909. Vol. II. Cloth. Pp. 1373. Washington: Government Printing Office, 1910.

Transactions of the American Climatological Association. For the Year 1909. Vol. XXV. Cloth. Pp. 287, with illustrations. Philadelphia, 1909.

Extract from the Thirtieth Annual Report, New York State Department of Health, 1909. Paper. Pp. 56.

Thirty-fifth Report of the Salem Hospital for the Year 1909. Paper. Pp. 39.

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Original Articles

A PLEA FOR HOSPITAL REORGANIZATION

GRAHAM LUSK
NEW YORK

Let us agree that we are all truly desirous of promoting scientific medicine. How is its development to be accomplished? It seems that the following propositions are axiomatic if the science of medicine is to be truly fostered.

1. The scientific physician or surgeon must have a continuous service in one hospital and in one only.
2. Appointment to the position of visiting physician or surgeon to a great hospital should be dependent on a reputation for accomplished work.
3. In the hospital, preferably on the other side of the hall opposite the hospital wards, there should be laboratories for careful scientific investigation and for carrying forward research regarding the causation and cure of disease.
4. There should be some endowment to pay for brains.

All have heard of these propositions, but how much serious concentrated attention has ever been given to them. To what extent has the system been permitted to drift along in the old ways of the fathers? The development of a New York lawyer is not dependent on the development of French, German, or Chinese law, but it is dependent on purely local conditions as they exist in this country. For example, the legal position of the railways in Berlin is quite different from that of the railways in Washington. Typhoid fever in Berlin, however, is the same typhoid as occurs in Washington. Physicians can learn much if they will adopt a world viewpoint. A progressive New Yorker should fight to destroy the local conditions which fetter his progress and suck his life's blood.

The continuous service is absolutely essential to progress. The wards must be the glory and the pride of the master-mind in charge. They must be a part of his reputation, a part of his joy of living. The head nurse should not be the principal person who is in continuous control. All present know this, and yet few will even think about it, much less act on it. It is so much easier to go to sleep and forget all about it. And while New York is dully sleeping, if it were awake it would take cognizance of the great examples of productivity set by the continuous services of the Johns Hopkins and Ann Arbor Hospitals. Other places which have adopted the continuous service are Pennsylvania, Minneapolis, Iowa City, Cleveland, Galveston and St. Louis. In St. Louis a new hospital with $5,000,000 is assured and in addition to this a children's hospital is to be built, with one hundred and fifty beds. A new medical school on the highest lines will be developed there. Also the resignations of the whole faculty are in the hands of the authorities. And this state of affairs has only roused the East by striking terror into the hearts and homes of some of our medical colleges lest they lose their very best men for whom during so many years they have so illy provided. Let us get together then and make a life of scientific progress possible in a New York hospital. Do not think, however, that the mere promotion of a practitioner of medicine to a continuous service is going to transform him into an advanced medical thinker. Success depends on the selection of the proper type of man who has had the proper training.

Regarding appointment to the service of a great city hospital there is room for much improvement. There should be a complete revolution in the present method. The right to inherit a position should be entirely eliminated as a factor. In general, the promotion of an assistant to the place of the master merely means the promotion into a prominent position of a younger man who more than likely owes his appointment not to his vigorous intellectuality, but rather to his submissive attitude during the days of his tutelage. This is a very widespread evil, this right to inherit. The cure for this is a greater migration of men among the medical institutions of this city and country. A man should not be cut off from a distinguished career in New York because his reputation has been founded in Syracuse or in New Haven. It seems that there must be a great strengthening all along the line if the rule were made that no assistant could ever succeed his chief. Then to rise, the assistant must through his capacity excite sufficient admiration to be called to take charge of a smaller institution. If he again succeeds he might then become eligible for a high position as one of the great masters of medicine in New York City. The scheme would do away with much that is scandalous regarding appointments to hospitals and medical schools in this country, and would inspire hospital trustees and givers to medical charity with a new confidence in the disinterestedness of medical men. This scheme is not utopian, or the mere dream of an idle extremist, but it is a part of the competitive system which has caused the rise of modern German medicine. By such a method you can help to vitalize scientific medicine. The man who rises to highest achievement in this country should be offered the highest reward in the shape of appointment to chairs in medical schools and places in hospitals in this great city. Were hospital trustees sure that such a procedure would be faithfully carried out, there would be no friction between them and their medical boards.

With regard to the arrangement of a hospital for scientific research, the laboratory should be across the hall from the wards, or, at any rate, easy of access to the wards. In such laboratories great work is done in

It is easily operated and there is nothing to get out of order.

In what class of cases is nitrous oxid and oxygen indicated? Crile[5] has called attention to the use of this anesthetic in certain so-called handicapped patients. He says:

> The natural immunity of the patient is little if at all impaired by nitrous-oxid-oxygen anesthesia, as contrasted with a distinct impairment under ether anesthesia. Likewise there is less surgical shock under nitrous-oxid-oxygen than under ether anesthesia. In patients handicapped by infection or by a previous impairment of the central nervous system, nitrous oxid permits a safer operation than does ether.

His position is well taken, as it is especially in this class of cases that the gas is indicated. In the aged, in persons suffering from acute infections, in cases of nephritis or diabetes, and in patients who have suffered from nausea and vomiting this is the anesthetic of choice. Teter[6] of Cleveland, who has probably had the largest experience in prolonged administration of the gas, has reported over 13,000 administrations, of which over 1,000 have been for major operations. In the larger cities of the country this anesthetic is rapidly coming into more general use. Its greater safety has been proved, and this is a fact that should not be ignored.

Although this anesthetic has certain advantages over ether and chloroform, yet there are some contraindications to its use. In prolonged operations it should not be used in persons who drink or smoke to excess. In emphysema, asthma, in marked arteriosclerosis and in cases in which there is any obstruction to respiration it is not indicated. In prolonged operations on children under 8 years of age the gas is not desirable.

My own experience with the gas has been in a variety of cases, among which are the following: prostatectomy, both perineal and suprapubic, nephrectomy, appendectomy, abdominal and vaginal hysterectomy, colostomy, lithotomy, salpingectomy, dilatation and emptying the uterus, amputation of the leg, herniotomy, etc. The youngest person to whom I have administered it was 3 years, the oldest 86. The longest administration was one hour and fifty-four minutes. The following cases will serve as illustrations:

Case 1.—F. B., aged 64. The operation was a suprapubic prostatectomy by Dr. Gustave Kolischer. The anesthesia lasted thirty minutes. The patient awoke before leaving the operating-room and there was no discomfort from the anesthetic.

Case 2.—J. W. B., aged 86. The operation was a double herniotomy by Dr. H. Reineking. The duration of the anesthesia was one hour thirty minutes. The patient took the anesthetic nicely and awoke about five minutes after the gas was stopped.

Case 3.—H. M. M., aged 65. The operation was a suprapubic prostatectomy by Dr. H. A. Sifton, the anesthesia lasting twenty-five minutes. For more than twenty-four hours this patient had not voided urine and the bladder was greatly distended with bloody urine. His temperature was high and he was not a good subject for anesthesia.

Case 4.—B. S., aged 76. Colostomy was performed by Dr. F. H. Munkwitz, the anesthesia lasting thirty minutes; there was no post-operative discomfort.

Case 5.—Mrs. F., aged 25. The operation was the dilatation of the uterus and removal of a dead fetus, by Dr. R. W. Holmes. Anesthesia lasted fifty-nine minutes. This patient was suffering from a severe toxemia and should be classed with "handicapped patients."

Case 6.—Mrs. H., aged 76. Appendectomy was performed by Dr. W. T. Nichols. The anesthesia lasted thirty minutes and there was no discomfort following.

Case 7.—H. S., aged 50. The operation was a herniotomy by Dr. D. J. Hayes. The anesthesia lasted one hour eleven minutes. This patient was suffering from nephritis.

Case 8.—Mrs. V., aged 37. Vaginal hysterectomy was performed by Dr. R. G. Sayle, the anesthesia lasting one hour fifty-four minutes. Although this patient had been sick after a previous anesthetic she was not sick at this time and stated that the recovery from this was like waking from a natural sleep.

Satisfactory as this anesthetic is in selected cases, yet it is not entirely free from objections. One of the greatest objections to its general use is the expense. It requires considerable skill to administer the gas successfully, and one skilled in its use is not always available. Even when it is administered by one experienced in this work, the anesthesia which results is not as complete as with ether or chloroform. Sometimes it is almost impossible to obtain sufficient relaxation of the abdominal muscles. While this may be due to poor technic on the part of the anesthetist, yet it is not always the case. The incompleteness of the anesthesia is at times a hindrance to the operator, but it is less so as he becomes accustomed to this anesthetic. The color of the blood is dark, but this condition is of short duration and is not a cause for alarm.

It seems that this anesthetic is destined to come into more general use than at present. When we consider that it is the safest of all anesthetics, does it not merit some consideration in the choice of an anesthetic? It is not disagreeable to take and the short time necessary to get the patient asleep is an advantage over ether and chloroform. As a preliminary to ether it has a wide field.

CONCLUSIONS

Nitrous oxid and oxygen is the safest of all anesthetics.

Postoperative complications are less frequent after this anesthetic.

Its more general use should be encouraged.

498 Murray Avenue.

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[5] Crile: Wisconsin Med. Jour., August, 1909.

[6] Teter, Charles K.: Thirteen Thousand Administrations of Nitrous Oxid with Oxygen as an Anesthetic, The Journal A. M. A., Aug. 7, 1909, liii, 448.

PLEURAL EFFUSIONS

AN ORIGINAL MEANS OF DRAINAGE IN PURULENT CASES WITHOUT RESECTION OF RIB *

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Effusion in the pleural cavity occurs under a great variety of conditions and circumstances. It may be serous, fibrinous, sanguinous, purulent, or a combination of two or more of these, such as serofibrinous, seropurulent, serosanguinous or sanguinopurulent.

The character and nature of the effusion depends somewhat on the cause of its production and the virulence of the germ with which it may be associated. It may be unilateral, bilateral, diffuse, localized or sacculated, depending also somewhat on the character of the effusion and the cause of its production. The unilateral effusion is by far the most common.

The etiology is even more varied than the character of the effusion. It occurs in all ages, the infant being more

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* Read before the Buffalo Academy of Medicine.

prone to purulent effusion and the adult to the serous form. It may be caused by a simple pleurisy, traumatism, tuberculosis, nephritis, rheumatism, typhoid fever, pericarditis, malignant growths of the kidney or other organs, ovarian tumors, cirrhosis of the liver and various other conditions.

Purulent effusions occur frequently in infants and children after pneumonia; hence, when they develop they are often mistaken for unresolved lung tissue. I recall several instances of this kind in which empyema followed pneumonia and the condition was diagnosed as incomplete resolution or consolidated lung.

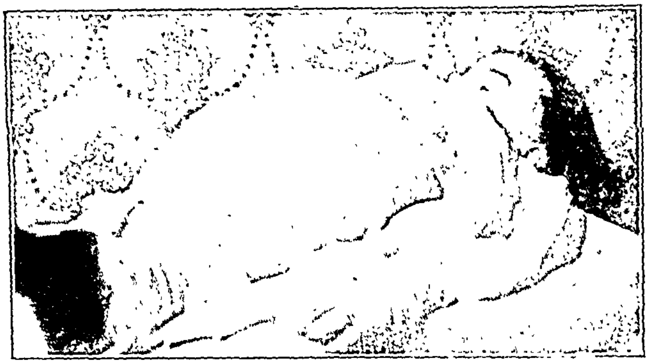

Fig. 1.—E. C., aged 5; sarcoma of kidney producing a sero-sanguinous effusion of the pleura; same side.

The most certain means of determining the existence of fluid and its character is by the use of an aspirating needle. If the needle be made sterile and the skin through which it is to be introduced is thoroughly disinfected it may be used with impunity, although Opie recently has stated that the removal of the fluid during the inflammatory stage may cause the leucocytes to break down, and change the serous exudate to a purulent one without any bacterial invasion, the serum seemingly having a restraining effect in preventing pus formation. Carelessness in the use of the needle will frequently cause a serous fluid to become purulent, or too deep an introduction of it may produce a condition known as pneumothorax.

The failure to obtain fluid is not conclusive evidence that it is not present. The failure may be due to the use of too small a needle, or its introduction in the wrong spot, the effusion being sacculated, or a faulty position of the patient; therefore, a good-sized needle should be used with the patient in a sitting posture.

Occasionally serous effusions, and purulent ones, too, when due to the pneumococcus, may be absorbed if in small quantity. Notwithstanding that it may be absorbed in a few instances when left to Nature, and its absorption greatly assisted by the use of drugs, I believe that in cases in which effusion is positively determined it should be relieved by mechanical means and not left to Nature, thereby running the risk of a collapsed lung or general sepsis.

If the fluid be serous, the simplest means of removal is by a Potain aspirator; but if the effusion be purulent, aspiration is useless and thorough drainage must be used.

DRAINAGE AND RESECTION

In cases of empyema in which the patient is desperately ill and septic, it has always seemed to me a too heroic and shocking method to have an inch of rib resected when the patient is in need of every spark of vitality and the most favorable conditions to recover. Scharlau[1] reports 56 consecutive cases in which the patients were operated on by primary exsection of a rib, of which number 18 died, a mortality of 33 per cent.

Various forms of drainage have been used to obviate the necessity of the resection of an inch of rib, but all methods under my observation or knowledge were failures. Rubber tubing is frequently tried, but the tubing will become compressed by the closing together of the ribs after the evacuation of the pus, and drainage is shut off. If there is sufficient space between the ribs, the tubing will become bent on itself by the expansion of the lung, crowding the pulmonary pleura against the end of the tubing, and thus shut off drainage. A soft catheter is sometimes introduced and will drain until the large mass has come away and the lung expands and the ribs come together; then the soft catheter becomes useless, and exsection of a piece of rib has to be finally resorted to and a soft rubber drainage inserted. Soft tubes, besides failing to drain, frequently work loose and are lost in the pleural cavity, and their removal requires a much more serious operation than the resection of a rib.

AUTHOR'S METHOD OF DRAINAGE

To obviate this I have made a tube which I believe will do away with resection of a rib in at least 85 per cent. of the cases. I have used it in a great many cases, and in every instance drainage was complete and a perfect recovery of the patient followed. It is very easy of introduction, and in an adult can be introduced under local anesthesia, either by the infiltration method or by freezing. If, on account of fear of pain, a general anesthetic is used, it is not necessary to crowd it to the point of surgical anesthesia. The technic is very simple. After the diagnosis of purulent effusion has been made the patient is prepared in the following manner:

Operation.—All clothing above the waist is removed and the patient is placed on the side of the table corresponding to the side in which drainage is to be made. The patient should be brought well to the edge of the table so that the operator may work easily and freely without turning the patient on his unaffected side. This I consider a very important point, whether the patient is to take a general anesthetic or not, as it gives the patient free use of his good lung; whereas, if he were laid on the side of his good lung the patient is put in greater danger from his inability to breathe. I have seen patients become cyanosed and moribund when placed on the side of the good lung for operation for empyema, and I am, therefore, very cautious in this matter. Under the back of the patient is to be placed a Kelly pad. The part is then scrubbed with ethereal soap and wiped with a clean aseptic towel or piece of absorbent cotton. The patient is not to be placed on a slab and exposed to a general scrub, which would cause a general blanching of the skin and congestion of the internal organs, and increase

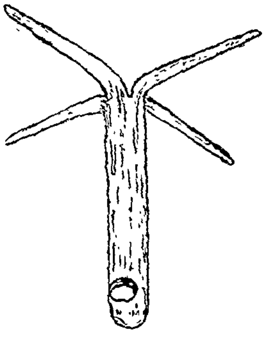

Fig. 2.—The author's empyema-tube.

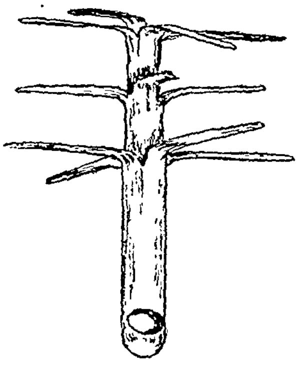

Fig. 3.—In nests of three.

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1. Arch. Ped., August, 1897.

very much the danger from an already overworked and impeded heart. The advantage gained by the more thorough and complete asepsis is more than counterbalanced by the time consumed in scrubbing the patient and the extra amount of shock that is produced by exposure and resulting internal congestion.

After a speedy preparation, if the pus be not sacculated, the point of selection for the introduction of the tube is in the seventh or eighth intercostal space in the midaxillary line where the ribs are usually farthest apart and most easily separated, and the chest walls thinnest. A linear incision is made in the interspace parallel to the ribs, between which the tube is to be introduced.

The incision should be from one to two inches long, through the skin and intercostal muscles, care being used to avoid cutting the intercostal artery which lies on the under side of the rib. By hugging the knife to the superior surface of the rib this is easily avoided. When the incision is made down to the pleura the opening in the pleural cavity is made simply large enough to admit the tube. When the opening is made I usually take a pair of dressing or artery forceps and introduce them into the opening to separate the ribs and start the pus. The tube is then introduced until the pus runs freely.

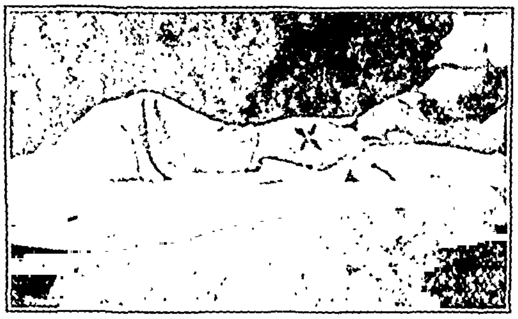

Fig. 4.—Drainage-tube introduced in a case of empyema following pneumonia; patient aged 4.

If the tube is too long and injury is feared to the opposite pleura, gauze can be wound around the tube externally to limit the extent of its introduction. After the pus is thoroughly evacuated a loose dressing of gauze and a thick layer of absorbent cotton are laid over the tube to absorb the discharge and held in place by adhesive strips, and this covered by a bandage. The dressings should be changed daily for a few days. If at any time the tube should become plugged it can be easily removed, cleaned, sterilized and reintroduced without any pain to the patient, by applying a few drops of a 4 per cent. solution of cocain.

In none of my cases have I ever attempted to wash out the pleura. I believe that this is a dangerous procedure and should rarely be used. In all of my cases recovery has been rapid and uninterrupted and no relapses have occurred.

The average length of time for the use of the tube has been about twenty-one days.

The tube should be made of silver in nests of three sizes (Figs. 2 and 3), the diameter of the tube as well as the length being varied; the one can be used that is most suitable to the case under consideration. I have never had any difficulty in introducing this tube in patients, even in infants.

In presenting this paper I have not attempted to give an exhaustive discussion of the subject; I have purposely omitted many salient features, such as hygiene, morbid anatomy, therapeutics, diagnosis, and pathology and various modes of treatment. This can be read in any text-book in a much more pleasing manner than I can present it.

SUMMARY

Effusions in the pleural cavity are not to be diagnosed solely by flatness on percussion; neither is the respiratory murmur always absent on auscultation, as is popularly believed.

The most reliable method of diagnosing fluid and its character is by the aid of an aspirating-needle, and this is not always to be relied on.

The point which I wish to bring out in this paper is the drainage of purulent cases by means of a tube without resection of a rib, whereby the operation is changed from one of a major type to a simple, minor one, reducing very much the time required in doing it as well as the dangers accompanying it, thereby considerably lessening the mortality.

25 East Ferry Street.

A NEW METHOD OF DEMONSTRATING THE CAPSULES OF BACTERIA *

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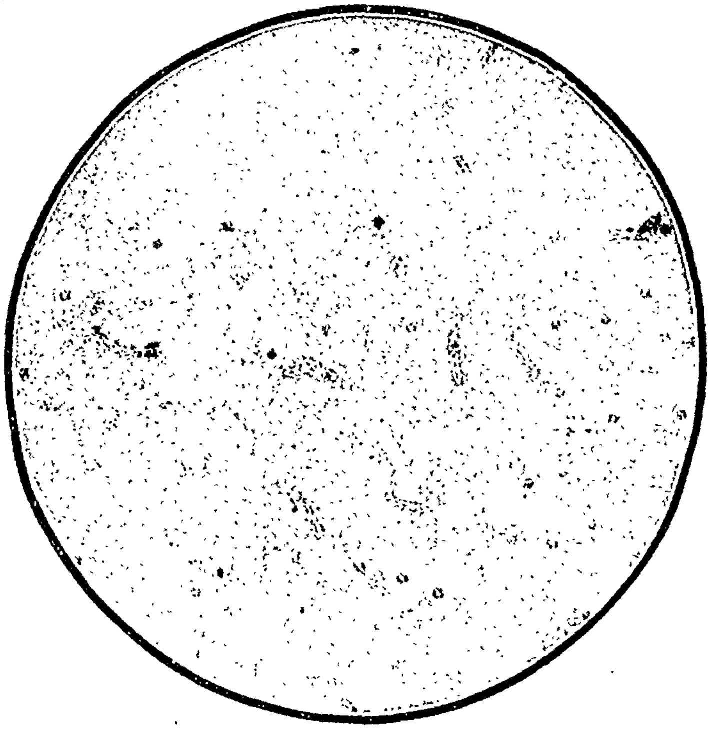
The most satisfactory methods at the present time for the staining of capsules of bacteria are those of Welch and Hiss. The method of Welch depends on the precipitation, by glacial acetic acid, of the mucin composing the capsule. The acid is then replaced by aniline gentian violet, which is added repeatedly, and finally washed with a 2 per cent. solution of sodium chlorid. Hiss employs ascitic fluid in making the smear. After drying and fixing in the flame, the film is covered with a 5 per cent. solution of gentian violet, stained for a few seconds and then washed with a 20 per cent. solution of copper sulphate.



Pneumococci demonstrated by India-ink method: from ascitic bouillon culture, twenty-four hours' growth.

The present method is an application of the principle involved in the India-ink "stain" for the *Spirochæta pallida*. The latter was adopted by Hecht and Wilenko early in 1909 and reported by Frühwald.[1]

The chief difficulty in the demonstration of bacterial capsules by the various stains proposed is the same as that encountered in the demonstration of the *Spirochæta pallida*, namely, an easy differentiation of the structural outlines in the stained film in which they are fixed. The principle of dark-field illumination overcame the difficulty in so far as the spirochete was concerned but did not prove sufficiently simple in application for general adoption outside of the laboratory. A drop of the approved ink of Günther Wagner makes the demonstration quite possible for anyone possessing a 1/12 inch homogene immersion lens. A drop of ink on a slide is rubbed up with a drop of serum, from a chancre, for instance, and is then drawn out into a fine uniform film. The spirals of the spirochete, being of appreciable thickness, are not covered by the ink and therefore stand out clearly against the dark background.

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* From the Pathological Laboratory of the Roosevelt Hospital, New York City.

[1] München. med. Wehnschr., Dec. 7, 1909.

In the routine examination of throat smears of syphilitic patients in this hospital it was noticed that the numerous bacteria of the mouth were quite as clearly indicated and the idea of demonstrating the capsule of the pneumococcus presented itself. Various methods of applying the ink were tried; first, staining the bacteria in suspension, adding the ink and drawing out into a film; second, mixing bacteria with ink and drawing out into a film as for spirochetes, allowing to dry and then floating stain on the inked surface. The second method is applicable to the demonstration of pneumococci in viscid sputum. The following method is proposed as that followed by the best results:

1. Make a thin smear of sputum, pus or bacterial culture in usual manner on a clean slide and allow to dry in air.
2. Fix by passing through flame in the usual manner.[2]
3. Stain with aniline gentian violet for five minutes, or stain as for Gram, *i. e.*, aniline gentian violet, iodin, alcohol, water, acid fuchsin.
4. Wash with distilled water and blot with filter-paper.
5. Place a drop of India ink in center of stained smear, and draw to one end of smear by means of a strip of cigarette paper one-half inch in width.
6. Allow ink to dry, add a drop of immersion oil and examine with 1/12 inch lens.

The pneumococci or encapsulated organisms will appear in a light-brownish background, the bodies staining deeply, the capsules faintly. The circumference of the capsules will be found to be surrounded by a condensation of fine ink particles which happily intensifies the effect. The physics of this phenomenon is readily understood. The bodies of the bacteria stand somewhat above the general level of the film. The ink in its fluid condition collects about the bacteria in the same way as water rises on a glass rod to form a negative meniscus.

The capsules may be demonstrated quite as well if the film is stained in an unfixed condition, a somewhat longer time being required for staining. Other stains, such as aqueous solution gentian violet and carbol-fuchsin, may be used, or, if pneumococci are to be demonstrated in blood-smears from mice, Jenner's stain may be used. In washing off the stain sterile water seems to have little or no effect in causing a shrinkage of the capsules in either fixed or non-fixed films. A 2 per cent. sodium chlorid solution or 20 per cent. copper sulphate solution may be used, but these cause an apparent granulation of the ink. A very small drop of Günther Wagner's (Wein and Hanover) India ink of the grade known as Peliken No. 541 will suffice. If the ink is too thick it may be diluted by adding a few drops of distilled water. Higgin's General Drawing Ink may be used but is much inferior. As the ink has a tendency to dry rapidly the process of coating the stained smear may be facilitated somewhat by applying the ink with a platinum loop in a line corresponding to the narrower dimension of the smear. Cigarette paper of uniform texture is employed, as one obtains in this way a very thin and uniform coating of ink. The edge of the paper is brought into contact with the line of ink and as soon as capillary attraction is established the paper is drawn over the surface of the bacterial film. But a few seconds are necessary for ink to dry. A drop of cedar-oil is placed directly on the surface of the ink, a cover-slip being unnecessary.

A portion of the smear is allowed to remain uncovered by the ink for the purpose of comparison. For example, if a Gram stain has been made the capsules may be demonstrated at one end of the slide and the question of the Gram properties decided at the other end.

A quicker method which gives good results consists in gently steaming with 5 per cent. aqueous solution of alcoholic gentian violet, pouring off excess, blotting and coating with ink. If this method is used one must not mistake the peripheral zone of a non-capsulated bacterium, where light is more readily transmitted, for a capsule. Any uncertainty which may arise in this manner may be overcome by comparing the size of the body of the presumably encapsulated organism with its size in the portion of the smear not coated by the ink. Often a slight change of focus will clear the difficulty.

The capsules—of the pneumococcus, for instance—are demonstrated best in cultures of ascitic bouillon or blood-serum or from blood of inoculated mice. In making smears from blood-serum or other media it is well to utilize the water of condensation.

If the smear contains a variety of organisms the differentiation of capsulated and non-capsulated organisms is rendered simple. The non-capsulated bacteria show no zone of lighter stain about their bodies, but on the contrary are surrounded by a condensation of the ink.

The selection of a suitable ink is of utmost importance. The two essentials are, first, that there be a certain amount of ink in solution, and, second, that the ink particles in suspension be of uniform and extreme fineness.

The method has been found of especial value in demonstrating capsules in old cultures of pneumococci. If a smear stained by the Hiss of Welch method is coated by the ink the capsules are found to stand out clearly in many cases.

Attempts to demonstrate flagella of organisms have been unsuccessful, both in stained and unstained films.

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[2] This may be omitted; if so, allow stain to act for ten minutes.

SPASTIC PARALYSIS *

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Spastic paralysis may be either a symptom of a functional neurosis or the result of an organic lesion. If the latter, its existence indicates an involvement of the pyramidal tract somewhere between the cortex of the brain and the anterior horns of the spinal cord. It seems best to discuss first the various lesions from which spastic paralysis may result and then briefly to describe those points which are of assistance in differentiating them from the purely functional morbid states.

Spasticity and the exaggeration of deep reflexes which is associated with it are both the result of increased muscular tonus, the latter, in turn, being caused by the cutting off of the influences of regulation centers. The exact location of these centers has not been definitely determined, although there can hardly be any doubt that one of them—and that perhaps the most important one—is to be found in the cortex of the brain, while others are supposed to exist in the pons, the nucleus ruber, the spinal cord, the semicircular canals and the cerebellum. Increased muscular tonus may result in a slight stiffness only, so slight that it becomes evident only on voluntary movement, or it may lead to contractures so intense as to make all movement impossible. All conditions lying between these two extremes are usually designated as spastic paresis or spastic paralysis. We do, however, find that more or less weakness of the muscles almost invariably accompanies their rigidity. If the lesion causing the palsy destroys the myelin sheaths of the nerve fibers, but leaves at least some of the fibrillæ intact, then that symptom which is known to all as "intention tremor" is supposed to result.

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* Read by invitation before the Chicago Orthopedic Society, Jan. 13, 1910.

The syndrome which results from destruction of the pyramidal tract alone is seen in its purest form in three morbid conditions: in the later stages of cerebral hemiplegia, in the primary lateral sclerosis of Erb and Charcot and in Little's disease. To the first of these I shall revert when discussing spastic paralysis of cerebral origin.

The Erb-Charcot malady usually begins during the second or fourth decade of life and is very slowly progressive. In it the spasticity in the legs dominates the clinical picture, while the paralysis is but slightly marked. Associated movements are frequently observed. The deep reflexes are greatly increased and show a tendency to jump to the opposite extremity. The cutaneous reflexes are usually intact or moderately decreased. The symptoms gradually reach higher levels, so that in the later stages we may find rigidity in the upper extremities as well as in some of the muscles controlled by cerebral nerves. Sensation, vasomotor and trophic nerves, sexual function, bladder and rectum show no deviation from the normal. In this disease the pathologist finds a primary sclerosis of the pyramidal tracts.

Senile spastic paralysis, resulting in very similar symptoms in at least some cases, is due to arteriosclerotic changes within the cord. Because of this pathologic basis, the syndrome is prone to be less pure than in the disease just described. In some rare instances of what is known as hereditary or family spastic paralysis we meet with virtually this same group of symptoms; and here, too, the microscope shows a degeneration of the upper motor neuron.

Little's disease, infantile spastic diplegia, is a disease in which again spasticity is the dominant feature. There is little, if any, paralysis. The legs are more markedly affected than the arms. The symptoms, which become noticeable very early in life, show a marked tendency to regression. Unfortunately this does not apply to the mental defect, which constitutes the saddest feature in such cases. Almost invariably either some prenatal deleterious influence or a premature, difficult or prolonged parturition can be found as etiologic factor. In some instances the disease seems due to an agenesis of the pyramidal tracts; in other cases a diffuse gliosis with increase in the number of blood-vessels in brain and cord, but without any circumscribed changes, has been found.

Combined with other symptoms we find the syndrome of spastic paralysis in most cases of disseminated sclerosis, in various forms of myelitis as a result of secondary degeneration of the pyramidal tracts, and from the same cause in compression of the spinal cord. Similarly to the other symptoms of general paresis may be added a spastic paraplegia.

In multiple sclerosis we find optic atrophy, or less frequently optic neuritis. Temporary paralysis of extrinsic eye muscles may occur. The pupils are often unequal in size, rarely rigid. Nystagmus or nystagmoid movements are often present. There is paresis with rigidity, often paraplegia. The deep reflexes are increased, the Babinski phenomenon often marked. The abdominal reflex is said by Mueller to be very frequently abolished even in the very early stages. My personal experience leads me to believe that the importance of this latter symptom has been rather exaggerated. Intention tremor and scanning speech are considered among the cardinal symptoms. Disturbances of cutaneous sensation may be lacking entirely; when present are usually slight and often evanescent. Occasionally neuralgic pains have been observed. The rectum and sexual function are but rarely affected in the early stages; micturition, however, is often impaired. Involuntary laughing and crying, apoplectiform attacks, ataxia, loss of memory and other slight mental defects, headache, not infrequently simulating megrim, are other symptoms worthy of mention.

In acute myelitis we find usually fever, slight pain in back, a feeling of fatigue, and paresthesias in legs in the early stages. Since the most common localization of the morbid condition is in the dorsal region of the cord, paralysis of the lower extremities often results, which is flaccid in the beginning, but soon becomes spastic. Twitching of muscles is commonly seen in the paralyzed limbs, both of spontaneous origin and after sensory stimulation. Both the deep and the cutaneous reflexes are increased. There is usually more or less complete loss of sensation below the seat of the lesion. The sphincters are almost invariably involved, bed-sores occur early and are very troublesome, and the occurrence of optic neuritis has been reported in a number of cases.

Chronic myelitis produces practically the same symptoms, but they appear more gradually. Fever is absent, unless caused by some complication like cystitis and decubitus.

Syphilitic myelitis may produce a great variety of clinical manifestations, which are partly due to involvement of the meninges, the spinal roots and the cord proper. It is differentiated from other forms mainly by the history or evidence of past luetic lesions, the existence of symptoms suggestive of multiple foci of disease, the great variability in the intensity of the symptoms, the preponderance of nocturnal pain, the frequency with which certain extrinsic eye muscles are paralyzed, the fact that the pupils are probably never perfectly normal, and—if all else fails—by the therapeutic test.

Compression of the spinal cord through fractures, dislocation or distortion of vertebræ causes a flaccid paralysis when the trauma results in a complete transverse lesion. Incomplete destruction of the cord located above the lumbar region results in spastic paralysis of the lower extremities with increased deep reflexes, partial loss of sensation and with pains radiating into the paralyzed extremities and paresthesia. The sphincters are usually—though not invariably—affected. The history of an injury would make the diagnosis an exceedingly simple one were it not for the fact that spinal hemorrhage may produce exactly the same symptoms. Where there exists a palpable deformity of the spinal column or where the Roentgen ray demonstrates its presence, this difficulty does, of course, not exist.

Tuberculous spondylitis is encountered more frequently early in life. Tuberculous foci in other parts of the body can usually be detected. A trauma to the spinal column often determines the localization of the process. In one of my own cases a woman with tuberculosis of the lungs and the bladder fractured a vertebra while attempting to lift a heavy box from the ground. Here a latent lesion must have weakened the diseased bone. The malady first causes dull pain along the spine, then rigidity of the same with sensitiveness to heat and pressure. Neuralgiform pain and paresthesia later change to hypesthesia or anesthesia. Atrophic paralysis of the muscle results. Here, too, if the seat of the lesion be above the lumbar enlargement, a flaccid paralysis of the lower extremities is followed by spasticity with increased myotactic irritability. Both sphincters usually suffer early.

Tumors may produce a very similar combination of symptoms, and this is especially true of carcinoma of the vertebræ. This latter is practically always metastatic, and a search for the primary lesion and consideration of the patient's age will prevent diagnostic errors.

When a lesion of the pyramidal tract occurs simultaneously with one of the posterior columns, we have added to the spastic paralysis more or less disturbance of sensation, both deep and superficial, of coordination and of the function of bladder and rectum. This occurs in the so-called combined system disease, sometimes in disseminated sclerosis, in dementia paralytica, diffuse myelitis, and in arteriosclerotic processes within the cord. Of these, only the first is to be described briefly here. Combined system disease may develop very rapidly or have a more chronic onset. Most often paresthesia or slight pain mark its beginning. Paresis of the extremities with spasticity, increased deep reflexes, associated movements, contractures, impairment of muscle, joint and bone sensation, ataxia, cutaneous anesthesia or hypesthesia, loss of control over bladder and rectum result; in some instances involuntary laughing and crying, dysarthria, nystagmus, vertigo and cerebellar ataxia follow an upward extension of the pathologic process.

Involvement of the pyramidal tracts plus anterior horns produces the clinical picture of amyotrophic lateral sclerosis. This disease usually begins between the thirtieth and sixtieth year of life and produces a very slowly progressive spastic paralysis, not infrequently unilateral in the earlier stages, combined with a degenerative atrophy of muscles, first seen, as a rule, in the small muscles of the hand. Fibrillary twitching, quantitative and later qualitative changes in the reaction to the electrical current are the rule. During the terminal stages bulbar symptoms, such as dysarthria, dysphagia, paralysis of the soft palate and of the tongue with fibrillary twitching and atrophy in the latter organ, weakness of the muscles of mastication and of the face are far from uncommon.

The central gray matter of the cord may suffer, together with the motor paths; and this combination we find in syringomyelia and sometimes in intraspinal hemorrhage. In typical cases of the former disease, atrophy of the muscles of the upper extremities, beginning in the small muscles of the hand and gradually spreading toward the trunk occur, together with spastic paralysis of the lower extremities. On the sensory side, pain and temperature sense are prone to suffer most. Trophic disturbances are common (Morvan's disease) as are those of the vasomotor nerves. Scoliosis and deformities of the thorax rarely fail to appear. Rectum, bladder and the sexual function suffer early. Bulbar symptoms often complicate the clinical picture. Sensory disturbances in the face, nystagmus, enophthalmus, ptosis and miosis have frequently been observed. In hematomyelia, once established, we may find absolutely the picture just described. The outset of this disease is, of course, very sudden, usually apoplectiform. In nine-tenths of all cases a history of trauma can be elicited, but in typhoid fever, hemophilia and pernicious anemia spontaneous hemorrhage into the cord has been observed. The symptoms are most marked within a few hours after the onset. Then there is always more or less improvement, unless the malady terminates fatally very soon.

Finally lesions outside of the cord proper may lead to spastic paralysis by pressure on that organ. This occurs, for instance, in tumor of the spinal column or the membranes, and then we often obtain a history of neuralgiform pains existing for some time, not infrequently for years before the appearance of other symptoms. Occasionally tremors of the muscles with rigidity and tonic contractions precede the more characteristic indications of a compression of the medulla spinalis. The spinal column itself is usually markedly sensitive to pressure, often also to extreme temperatures. In that rare disease which is known as "pachymeningitis cervicalis hypertrophica" the symptoms are absolutely those of a slow compression of the cervical cord. Almost invariably there is a history of luetic infection. Its extremely slow progress differentiates this trouble from others causing similar phenomena. Its duration is often from fifteen to twenty years.

An attempt at giving, however briefly, the differential diagnosis of cerebral troubles which cause spastic paralysis of the extremities is impossible here, since it would mean a review of practically the entire pathology of the brain. Palsy from cerebral disease is spastic. To this there is only one exception of real practical importance: During the first few days—rarely for a week or more—of ordinary apoplexy we find the useless muscles flaccid, but very soon their tonus returns and increases beyond the normal. This is true especially of those cases in which hemorrhage, embolism or thrombosis are the basis of the functional defect. In tumor or abscess of the brain, in encephalitis, etc., we are more liable to meet with spasticity from the very onset, and this is especially true of those lesions which involve an irritative process in the cortex. That cerebral disease causes hemiplegia most frequently, but may produce monoplegia or diplegia, need hardly be emphasized here.

With a brief consideration of those points which assist in differentiating organic from functional, i. e., hysterical spastic paralysis, I may conclude these remarks. First of all, permit me to call attention to the important fact that functional and organic disease may be combined in the same person, so that the existence, for instance, of stigmata of hysteria does not necessarily prove all nervous manifestations in that individual to be purely functional. I have seen an organic peripheral palsy of the facial nerve associated with functional paralysis of both extremities of the same side, a functional loss of cutaneous sensation in extremities affected by muscular dystrophy, etc.

The patient's age, the condition of his cardiovascular system, of his kidneys, his heredity, the existence or absence of previous evidence of a hysterical temperament, stigmata of hysteria, are often of diagnostic value. Fever, that large group of symptoms which are included under the terms of aphasia, the presence of conjugate deviation of the head and eyes, are, of course, evidence of organic disease. Monoplegias of hysterical origin usually follow injury to the paralyzed extremity, something that can hardly occur in organic lesions. Facial paralysis is very rare in the functional, very common in ordinary hemiplegias; but one must be careful not to mistake a spasm of the mimic muscles for their palsy. It should be remembered, too, that in spastic paralysis due to destruction of tissue the deep reflexes are almost invariably increased, the superficial ones decreased or lost. True clonus does not occur in hysteria. Sensory disturbances are usually more profound in functional disease than those found from lesions of the brain. This we must concede, even if we do not believe with Charcot that all hemianesthesias in hemiplegias are purely hysterical.

A word about the significance of the Babinski reflex: Many neurologists see in it absolute and convincing proof of an organic lesion; others claim to have seen it in hysterical cases. My personal experience compels me to agree with the minority. I am certain that I have found a typical Babinski phenomenon in several cases of hysterical paralysis.

The condition of the abdominal reflexes is often a most important help in differential diagnosis. As already stated, they are decreased or lost on the paralyzed side in hemiplegias. It is claimed by most competent observers that such a change is never seen in purely functional trouble, even if there be anesthesia of the abdominal integument.

Since we rely to so large an extent on the condition of the deep reflexes in our diagnosis, it may be well to mention that a unilateral increase of tendon reflexes has been seen in hysterical monoplegia and hemiplegia and bilateral temporary loss of the same in a few instances of hysterical paraplegia. Decrease of both knee-jerks is far from uncommon in hysterical patients who have been bed-ridden for a long time and whose quadriceps muscle shows atrophy from inactivity. Very important is the difference in gait in the two forms of hemiplegia. While the hysterical patient will drag his leg along like an inert body, he who suffers from true palsy will bring it forward with that peculiar semicircular swinging movement with which all are familiar.

The influence of suggestion on the existing disability often clears the situation. But we must not fail to remember that even organic paralysis is influenced to a marked degree by excitement or mentally depressing conditions. That the presence of reaction of degeneration or, in the early stages of the malady at least, even quantitative changes in the reaction to the electrical current, is conclusive evidence of organic trouble, goes without saying.

103 State Street.

A Comparison of Municipal Expenditures in Health Matters.—In an article on "Revenues and Expenditures of Cities," Prof. Charles E. Merriam (*University of Chicago Magazine*, March, 1910) finds by a comparison of figures that American cities lay more stress on fire protection and less on charities and correction than do European cities, and that Boston and London seem to have more in common as regards the importance of health administration than do Boston and Chicago. Although per-capita expenditures for recreation in Glasgow and St. Louis are identical, yet in the former city about two and a half times as much is obtainable for the same outlay as in the latter city. New York and Vienna agree in ascribing more importance to schools than do Glasgow and Philadelphia. The greater importance given to fire protection in American cities is said to be due to the more flimsy construction, and the lesser importance of charities and corrections is ascribed to the lesser amount of poverty and the greater development of private charities.

ANIMAL EXPERIMENTATION IN RELATION TO OUR KNOWLEDGE OF SECRETIONS, ESPECIALLY INTERNAL SECRETIONS*

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INTRODUCTORY REMARKS

Progress in pure science and in industry brings essentially luxurious delights to mind and body; the object of advance in the science of medicine, however, is in the first place to procure indispensable necessities for life and health. Necessities certainly come before luxuries. Ought we not expect to find sane humanity devoting its energies above all to the furtherance of progress in the domain of medicine? Unfortunately, just the reverse seems to be true; medical science again and again has to struggle with obstacles in its forward march. These obstacles are not only those which are wilfully thrown in its path by ignorant, ill-balanced and noisy individuals of both sexes; even the noble tendencies of pure science not infrequently have been quite obstructive to a wholesome development of the science and practice of medicine. The root of the evil is that not many have a vivid conception of the immensity of the gap which existed and still exists between what medicine really ought to be and what it was and largely still is, nor a proper conception of what the small group of workers have actually accomplished in the various departments of medicine.

In the following pages I shall give an outline of the progress made in our knowledge of glandular secretions, especially of the marvelous progress made in a brief time in our knowledge of internal secretions. By this outline I intend to demonstrate the inestimable service which experiments on animals have rendered to that feature of the science of medicine. The authenticated facts in this paper may thus be instrumental in disproving insinuations and accusations often raised against animal experimentation by two diametrically opposite camps: high science and low ignorance; the former frequently insinuating that the results are not sufficiently exact to be ranked as scientific work, and the other that animal experimentation has never been of any use either to science or to the practice of medicine.

The term "internal secretion" has been in use less than two decades, and the instructive facts which are covered by that term began to make their appearance not much longer than a quarter of a century ago. The knowledge of this form of secretion, young as it is, compares favorably with the knowledge of glandular secretion in general, which can look back on a history of nearly four centuries. The following two factors are responsible, I believe, for the marvelous progress of this new chapter of experimental medicine. In the first place, the recent investigations of the ductless glands were carried on purely by biologic methods of research. The second factor is to be found in the important fact that these investigations had the great advantage of a harmonious cooperation of critical animal experimentation, scientific clinical observations and intelligent analysis of surgical results. I lay great stress on the biologic character of the method of investigation as an important factor in the progress of medicine. To my mind even the growth of our knowledge of glandular secretion in general can be traced back essentially to the purely biologic investigations which in the course of the slow development of the medical sciences in the past few centuries were carried on spasmodically. I shall attempt to illustrate this statement by some data, but before doing it I shall try to elucidate what I mean by the term of pure biologic research.

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* This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Thirteen of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, surgery, internal secretions, protozoan tropical diseases, etc.

BIOLOGIC METHOD OF RESEARCH

The marvelous growth of the natural sciences since the sixteenth century can be traced back to the scrupulous observation of the following two simple requirements of methods of observation: (1) The phenomena of nature have to be studied by actual observations, and (2) the correlations of these phenomena have to be established according to their respective merits and free from any extraneous considerations. The first requirement needs no discussion; it is evenly applicable to the investigations of all the divisions of natural science. The second requirement, however, presents different aspects in the different domains. As far as the inorganic world is concerned, the requirement is quite simple; it is directed chiefly against the inveterate interference of metaphysical theories with the interpretation of natural phenomena, and the requirement of freedom from such interference is here self-evident. Science has to deal with the provable; and since metaphysics avowedly deals with unprovable problems, it is evident that these two domains cannot coincide. It is different, however, when dealing with the phenomena of the living world. The correlation of these phenomena can be studied in the first place as in the inorganic world, exclusively with relation to themselves, without regard for extraneous domains. This method of study of the phenomena of the living world I designate as the purely biologic method of research. The living phenomena, however, can be also studied with a view of reducing them to phenomena of the inorganic world. This line of study I would designate as the physicochemical study of biology.[1] It is evident that in the latter line of investigation of living phenomena the rational requirement of freedom from extraneous considerations suffers a serious setback.[2]

The history of medical science shows that there was, consciously or unconsciously, a continual struggle between the followers of the two methods of investigation, sometimes the one, sometimes the other gaining the supremacy. This is not the place to enter on the history of this struggle; nor shall I attempt to dwell here on the merits of each side. There can be no doubt that both methods are absolutely legitimate, in fact, indispensable, and ought to supplement each other. I wish, however, to record here my opinion that, as a matter of fact, medical science in all its aspects has profited so far vastly more from the purely biologic researches than from the physicochemical researches in biology. This statement certainly holds good with reference to our knowledge of internal secretions; but, as stated above, it is true also, at least to a large degree, for glandular secretion in general.

GLANDULAR SECRETION

Previous to the new era in anatomy all small semisolid brown structures in the body were designated as glands. The filtration of the blood was the function assigned to these little lumps of tissue. With the regeneration of anatomy by Vesalius and other anatomists of the sixteenth century the distinction was made for the first time between secreting and blood glands. The physiology of secretion, however, did not benefit very much from the great progress made in anatomy. In the sixteenth century even the brain was considered as a secreting organ: it picked out the vital spirits from the blood and secreted mucus through the lamina cribrosa into the pharynx. Studies on the dead body alone, the chief object of study in the sixteenth century, could not reveal the real action of the living gland. It was not until the middle of the seventeenth century that the knowledge of glandular secretion began to assume a rational scientific aspect. Many writers trace this knowledge back to Malpighi's work on the liver, which was published in 1665. It is, however, a fact that important communications were made on the secreting glands previous to the appearance of Malpighi's work. It was the marvelous discovery of the circulation by Harvey, proclaimed to the world in 1628, which started the physiologic studies on the glands. Harvey discovered the circulation by studying it in living animals. This gave a great stimulus to the employment of animal experimentation in the study of the phenomena of life, and for many decades there was a rich harvest of discoveries of important facts in physiology.[3] By experiments on animals Johann Georg Wirsung (or Moritz Hoffmann) discovered in 1642 the duct of the pancreas, Thomas Wharton discovered (in 1652) the duct of the submaxillary gland, Nicolas Stenson discovered (in 1662) the duct of the parotid gland and also the lachrymal duct, and Rivinius (in 1679) discovered the ducts of the sublingual glands. De Graaf succeeded in 1664 in collecting pancreatic juice from the living animal, and Brunner discovered (in 1686) the glands of the duodenum, designated by his name. Malpighi (1628-1694), besides his great work on the liver, the gall-bladder, the bile ducts and on the kidneys, studied also the sweat and sebaceous glands of the skin. All these discoveries led up to the conception of (an external) secretion by glands provided with ducts. In contrast to these glands another group was designated as ductless glands, including in this group at first even the lymph glands. After the discovery by Aselli (1623) of the chyle-bearing vessels, and the discoveries by Pequet (1651), by Budbeck (1652) and by Thomas Bartholinus (1653) of the lymph vessels, receptaculum chyli and the thoracic duct, the lymph glands were separated for good from the other glands. The ductless glands comprised then the spleen, thymus, thyroids and adrenals.

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[1] The physicochemical study of biology should not be confounded with the employment of physicochemical methods in biologic research. All researches of function are necessarily carried on by physical or chemical methods. For instance, the removal of an organ is a physical, and the injection of an extract of this organ is a chemical method; at the same time the object of such investigations is of a purely biological character; it tries to establish the importance of that organ for the life of the animal. But the attempt to ascribe the function of an organ to some well defined chemical constituent of that organ, for instance, to ascribe the normal action of the thyroid gland to its iodine content, belongs to the chemical studies of that organ. It is a fact that even distinguished physiological writers are not infrequently guilty of confounding the employment of physicochemical methods in the study of biology with the physicochemical studies of biology.

[2] In these attempts to reduce the living phenomena simply to those of physics and chemistry even traces of metaphysical dictates can sometimes be detected, if we keep in mind that the interference of materialistic metaphysics is not much less deleterious to wholesome studies of natural sciences, than the interference of spiritualistic metaphysics.

[3] Animal experimentation was then a much less dangerous occupation for the investigator than the study of anatomy on a human cadaver. The leaders of human destiny at that age had no hestitation in killing men and even mutilating their dead bodies for any trivial reason, but objected to the use of the dead bodies of men when medicine and science could profit by it—just as the misguided of both sexes of our own day are ready to kill and maltreat all sorts of animals for personal profit, sport or vanity, but manifest a perverse moral indignation when such animals are used for the benefit of medicine and mankind.

Near the close of the seventeenth century the biologic researches into the nature of glands came to a standstill. Physico-chemical investigations and interpretation of living phenomena came to the front, and iatrophysicists and chemiaters held the stage for a good many years. In fact, all pure biologic researches seemed to have become silenced, at least greatly overshadowed, by the tendencies of physico-chemical investigations of biology, which gradually forged their way to the front in the course of the seventeenth century.. The mathematical and physical sciences possessed a lustre given to them at that epoch by the brilliant astrophysical researches of Galileo (1564-1642) and Kepler (1571-1630). The good work of Borelli (1608-1679) on animal motion, which was based on purely mechanical principles, the mechanico-biologic investigations of members of the newly organized Royal Society, for instance, the demonstration by Robert Boyle (1627-1691) of the danger of the vacuum to life, the demonstration of Robert Hooke (1635-1703) of the importance of artificial respiration, or the introduction of transfusion by Richard Lower (1631-1690)—all these factors were instrumental in demonstrating the fruitfulness of mechanical and physical analysis of living activities. The significance of chemical processes had begun to impress the minds of medical men already in the previous century by the aggressive teachings of Paracelsus (1490-1541). Under the influence of the teachings of Van Helmont (1577-1644), the discoverer of carbonic-acid gas; of Franciscus Sylvius (1604-1672), the founder of the first chemical laboratory, and of their pupils, chemical interpretation of biologic phenomena developed into a leading system.

For a very long period iatrophysicists and chemiaters struggled for supremacy in the fields of biology and medicine, pushing pure biologic research nearly entirely out of sight. During the eighteenth century practically no progress was made in the knowledge of glandular secretion. It is true that at about the middle of that century some experiments on gastric secretion were carried out on aimals by Reaumur (1683-1757), by John Hunter (1728-1793). and especially by the celebrated Abbé Spallanzani (1729-1799). But these experiments dealt chiefly with the process of gastric digestion and the nature of gastric juice; they did not concern themselves with the character of the glands and the act of secretion. The first important biologic investigation of secreting glands came to light in 1830; it was the celebrated comparative anatomic study of the secreting glands in the entire animal kingdom by Johannes Müller. About a decade later the animal cell was discovered; this gave a great stimulus to pure biologic researches, but they were essentially of a morphologic nature. The studies of the functional side of life became dominated, however, even more than ever by the physicochemical conceptions of that epoch. The brilliant physicophysiologic investigations of Du Bois Reymond, Helmholtz and Ludwig and their pupils, at about the middle third of the last century, were especially instrumental in establishing the absolute reign of mechanical conceptions in the domain of physiology. It was in harmony with these physical tendencies that secretion was looked on, as in olden times, as a mere mechanical process of filtration. A great deal of energy has been spent and brilliant experimental work done in support of this contention. Did these marvelous efforts greatly enrich our knowledge of the processes of secretion with actual facts? I believe that the attitude of Heidenhain[4] in assuming a "vital activity" of the epithelial cells was by far more fruitful in this direction. With the assumption of a vital activity Heidenhain claimed nothing else but the right to study living phenomena with reference to themselves. He did not deny that this vital activity might be explained one day by some new physical and chemical laws. He merely found it more profitable to study at present the living phenomena as they are, preferring no physicochemical interpretation to a premature interpretation by imperfectly known inorganic laws. Thanks to these efforts of Heidenhain and his followers, considerable progress has been made in the recognition of the processes of secretion and the intracellular changes accompanying them. We have thus now recognized the fundamental fact that secretion is a specific function of the glandular cells, just as contraction is a specific function of a muscle cell. The difference between the various secretory products has its origin in the specific secretory activities of the cells belonging to the different secretory organs.

I shall, of course, not enter here on a recital of the great amount of work done in the last sixty years on glandular secretion. I believe, however, that it is perfectly safe to state, as I did above, that the important facts which we know at present with regard to glandular secretion in general were discovered chiefly by means of purely biologic investigations.

THE FUNCTION OF DUCTLESS GLANDS

Since the discovery of the ducts of the various secreting glands, the spleen, thymus, thyroid and suprarenal glands were grouped together, as stated before, under the term of ductless glands. That term is still in use in the literature, except that in this group the spleen is now replaced by the pituitary body. The glands of this group have been known for more than four centuries. What are their functions and do they have any? Schäfer[5] tells us of the satirical comments made by Montesquieu nearly two hundred years ago on various essays offered in solution of the prize question: What is the use of the suprarenal glands? "Perhaps chance may some day effect what all these careful labors have been unable to perform," says Montesquieu. More than a century later we find the brilliant physiologist, Magendie,[6] telling his hearers:

> I have nothing to say on the suprarenal capsules. Since nobody any longer believes in *atra bilis* the capsules have ceased to be its secreting organ. . . . What function does the thyroid gland have? Nobody knows it. . . . That organ surely deserves the investigation of physiologists. . . . *Does it not attain in cretins an enormous size*[7] while the other organs become reduced?

However, we need only go back less than three decades to find the same profession of ignorance by competent authors. In the well-known work by Herrmann published in 1883,[8] it is stated in one line that we know nothing of the functions of the thyroids and adrenals. However, it was in the very same year that the "chance" came of which Montesquieu wrote. The precious chance came in the first place as a culmination of various activities with reference to the significance of the thyroid glands. But the light which was shed on the vital importance of these glands lit up the entire field of internal secretion which had remained impenetrably obscure for many past centuries.

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[4] Heidenhain: Hermann's Handb. d. Physiol., v, Part 1.

[5] Schäfer: The Oliver-Sharpey Lecture, Brit. Med. Jour., May 30, 1908.

[6] Magendie: Leçons sur le système nerveux, 1841.

[7] Italics mine. We know now that the opposite is true.

[8] Handbuch d. Physiol., v, 2.

THE IMPORTANCE OF THE THYROID GLANDS

In the course of the preceding centuries numerous theories were put forward regarding the significance of the thyroid glands. However, already at an early part of the last century various writers, among them especially Hofrichter,[9] analyzed these theories and discarded them. The theory which in the second third of the last (19th) century gradually gained most favor was the one put forward in the eighteenth century by Prochaska, namely, that the thyroid as well as the adrenal glands had, like the thymus, no significance for extrauterine life. It is true that already in the fifties of the last century experiments were published indicating the great importance of these glands in adult life. We shall speak of these experiments later more fully. These publications made, however, no impression on contemporary physiology. That science was dominated then, as stated before, by physicomechanical conceptions and manifested neither great interest in pure biologic researches nor special confidence in their results. There was (and still is) an ever-present tendency among the approved physiologic investigators to ascribe such results to some inadequate technic or to some carelessly overlooked secondary factor.

The first step in the new direction was made within the clinical domain, at first without apparent bearing on our question. In 1873 Sir William Gull[10] reported 5 cases of middle-aged women who had a cretinoid appearance, a more or less bulky form and other symptoms which characterized these cases as presenting a separate and new type of disease. In 1878 W. Ord,[11] who had had similar cases under observation since the sixties, reported one case which came to autopsy. The most striking finding was the mucin-like masses in the subcutaneous tissue which caused Ord to designate the new type of disease as myxedema. Among the post-mortem findings of this case atrophy of the thyroid glands was noted. The next contribution came from the surgical domain. With the general introduction of antisepsis at the beginning of the seventies, surgeons ventured to extend their activities to regions which formerly seemed to be inaccessible to their interference. Large goiters which are prevalent in some regions, especially in Switzerland, were now treated by radical operation. In April, 1883, Kocher,[12] of Berne, gave an extensive report of the after-effects of such complete removals of goitrous glands. The patients showed a peculiar complex of symptoms which Kocher designated as cachexia strumipriva. He looked then on the symptoms as being due to some degree of asphyxia caused by this operation. A few months before Kocher's report appeared Jaques Reverdin[13] of Geneva, made a similar but less extensive report, which, however, seems to have at first passed unnoticed. In November of that year Felix Semon[14] called the attention of the Clinical Society of London to the similarity of the symptoms of the postoperative cachexia with those of myxedema and suggested that in both cases the complex of symptoms might be due to an absence of the thyroids, which glands, therefore, may be of fundamental importance to the life of the human adult. This statement made such a deep impression on the society that a committee was appointed to investigate the entire subject. It should be mentioned that a few months before Reverdin,[13] in a second communication, recognized the similarity of the two types of phenomena and designated the complex of symptoms which follows the complete removal of the goitrous thyroids as operative myxedema. This communication also escaped general notice. But it was the means of calling forth the statement of Schiff,[15] who was then professor of physiology at Geneva, that in experiments made by him as early as 1856 he found that many of the animals succumbed after the complete removal of the thyroid glands. These results he communicated at first to the academy at Copenhagen and later made them known in a separate communication which appeared in 1858.[16] These communications apparently made not the slightest impression on contemporary physiology. Schiff[17] now repeated and extended his former experiments and found that especially in dogs the complete removal of the thyroids is mostly a fatal operation, the animals dying with symptoms quite similar to many of those observed after complete (surgical) removal of goitrous thyroids in human beings. A statement of great interest was soon made by P. Bruns.[18] He discovered in the literature from the sixties a report by P. Sick[19] of a case of complete removal of goitrous thyroids in a young boy.

He hunted up the operated subject and discovered that the patient, who was now at the end of the thirties, had the size and appearance of a mentally and physically backward boy—a surgical cretin. Autopsies of natural cretins then revealed the further fact that the thyroid glands were deficient in these cases.

These various communications brought to light the following series of new facts: (1) natural absence of the thyroids in adults causes myxedema; (2) natural absence of the thyroids in children causes arrest of growth and cretinism; (3) complete removal of the normal thyroids in animals is a fatal operation; (4) complete surgical removal of the goitrous glands in children causes surgical cretinism; (5) complete removal of these glands in adults causes surgical myxedema. These facts indicated clearly enough that the thyroid glands are of fundamental importance to the health and life of man and animal. Schiff,[20] however, brought forward still stronger evidence in favor of this thesis. He implanted in the peritoneal cavity of an animal one of its own thyroids and found that this animal survived for a long time the removal of the second thyroid—a sure proof that the fatal result of the complete removal is caused by the absence of the function of the thyroid gland and is not due to secondary lesions caused by the operation.

In the following years numerous experimental investigations in animals confirmed the main facts. The most extensive and important of these investigations were those of Victor Horsley,[21] then a member of the above-mentioned committee appointed by the Clinical Society, and of Ferdinand Fuhr.[22] As an instructive fact we shall mention that these experimental investigations were carried on mostly by non-official physiologists. Of the official physiologists it was H. Munk[23] alone who took an active share in this work, and this with the persistent claim that the observed results were due to an irritation of the adjoining nerves during the "careless" removal of the thyroid glands. There were also a few

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9. Hofrichter: Meckel's Arch. f. d. Physiol., 1820, vi, 186; Fuhr: Arch. f. exper. Path. u. Therap., xxi.
10. Gull: Tr. Clin. Soc., 1873, vii.
11. Ord, W.: Tr. Clin. Soc., 1878, xiii.
12. Kocher: Arch. f. klin. Chir., 1883, p. 254.
13. Reverdin: Rev. méd. de la Suisse romande, 1883.
14. Semon: Tr. Clin. Soc., November, 1883.
15. Schiff: Rev. méd. de la Suisse romande, 1883.
16. Schiff: Untersuchung über die Zuckerbildung in der Leber, etc., Würzburg.
17. Schiff: Arch. f. exper. Path., xviii.
18. Bruns, P.: Samml. klin. Vortr. (Volkmann's), 1884, No. 244.
19. Sick: Württemb. med. Cor.-Bl., 1867, No. 25.
20. Schiff: Rev. méd. de la Suisse romande, 1884.
21. Horsley: Suppl. Tr. Clin Soc., 1888, xxi.
22. Fuhr: Arch. f. exper. Path. u. Therap., 1886, xxi, 387.
23. Munk: Sitzungsb. d. Berl. Akad. d. Wissensch., 1887, p. 823; 1888, p. 1059

reports of experiments in which no profound effects were observed to follow the complete removal of the thyroids. Some of these reports, however, were based, as Fuhr conclusively has shown, on erroneous observations. The submaxillary glands were removed instead of the thyroids. Other failures could be explained by the facts that either the removal was in fact not complete, some parts of the thyroid remaining behind, or that in these cases there were some accessory thyroids which had not been removed.

All these investigations had in the first place the one important practical result, that surgeons stopped the practice of complete removal of goitrous glands. This they could do the more readily, since the investigations brought the important fact to light that the presence of only a small part of the thyroid was sufficient to keep up its function and to obviate the ill-effects of the removal.

The complete removal of goitrous glands was followed not only by serious chronic symptoms, but also by severe acute attacks of tetany, terminating sometimes fatally. Seven such deaths were reported from the celebrated clinic of Billroth in Vienna alone.[24]

The above-mentioned experiments of Schiff on the implantation of the thyroid in the abdominal cavity of dogs gave rise to the attempts of various surgeons to cure operative and normal myxedema by grafting pieces of human thyroid, removed at operations, into the peritoneal cavity or in the subcutaneous tissue of such patients. The most striking result of such a procedure was reported by H. Bircher[25] in one case. After each new implantation practically all pathologic symptoms disappeared for a long period. The success, however, was not permanent. Apparently the grafted fragments did not resume at the new place the function of the thyroid; they gradually became absorbed. The fact, however, that during the absorption of the grafted pieces the symptoms of the cachexia were kept in abeyance gave rise to the idea that the administration of an extract of the thyroid might perform a similar office. The first attempts to test this idea were made by Colzi[26] and by Vassale,[27] who injected such extracts intravenously into animals. In 1891 George Murray[28] established the important fact that subcutaneous injection of thyroid
extract in man is capable of abolishing all the sympt
of myxedema. This was followed by the announce
of Howitz,[29] in July, 1892, and by Mackenzie[30]
Fox,[31] in October of that year, that the same resu
be obtained by the administration of the thyroid
even cooked, by the mouth. The last named comm
tions demonstrated effective principle
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was further evident ion of the gland w
specific, inasmuch a t of glands of
species of animals a y on human p

These statements were soon generally confirmed all over the world and thyroid therapy became a well-settled fact.

We thus learn an impressive lesson. While the mere reasoning of many brilliant minds carried on for four centuries shed no light on the significance of the thyroid gland, the intense activity of modern experimental medicine managed to bring to light in less than ten years the following important facts with regard to these glands: (1) the thyroids are of fundamental importance to life and health; (2) a new disease was established: the "natural" atrophy of the thyroid in adult life leads to myxedema; (3) the real nature of a well-known disease was recognized: cretinism is infantile myxedema; (4) complete removal of goitrous thyroids during infancy leads to cretinism and their removal during adult life may bring on either myxedematous cachexia or tetany; (5) surgeons learned two important lessons: on the one hand, not to perform a radical removal of the goitrous glands, and, on the other hand, that the ill-effects can be obviated by leaving behind a small part of the gland; (6) extract of the thyroid gland is capable of removing the symptoms due to the natural or artificial absence of this gland. In short, by the methods of biologic research we learned in less than ten years a great deal of the physiology, pathology and therapy of the thyroid glands.

The studies were fruitful in many other directions, which, however, can be only indicated here by a few words. By experiments on animals and by observations on human beings it was found that the unrestricted administration of thyroid extract brings on a condition which is very similar to that pathologic complex known as exophthalmic goiter or Graves' disease. This fact led up to the conception that Graves' disease consists in the normal overproduction of the thyroid function—hyperthyroidism. This conception was fruitful in developing medical and surgical therapeutic measures on which we cannot dwell here.

Furthermore, it was found that thyroid extract has a therapeutic value in diseases other than myxedema and cretinism, for instance in obesity, scleroderma and some other skin diseases.

In the course of all these investigations the important discovery was made by Baumann,[32] in 1895, that the thy-
d contains iodin in an organic compound which some
eve to be c connected with the main function of
gland. further found that the thyroid
act exert n influence on the resistance of
e animal poisons and that this influence is
roportio in content of the gland.[33]
here is, e brilliant chapter in the investi-
ns of t hich should be told in somewhat
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24. See Anz. d. k. k. zte in Wien., 1
31. If the animal experi so much ligh
subject had been carried ttempts were
surgeons to perform the of goitrous g
human beings, a great deal y deaths mi
been spared. Experiments f animals s
extensively performed befor peration o
beings may be attempted. ks of dict
law to the surgeon what op ay not
there are individuals all ov h to ha
enacted suppressing or crippli animals.
a perversion of reason and mo
25. Bircher, H.: Samml. klin. 1889,
26. Colzi: Sperimentale, 1884.
27. Vassale: Centralbl. f. d. m 1
28. Murray: Brit. Med. Jour.,
29. Howitz: Lancet, 1892, ii, 1
30. Mackenzie: Brit. Med. Jour.
31. Fox: Brit. Med. Jour., Oct.

xxi, 319.
II. No. 47 Hyg. Lab.

THE PARATHYROID GLANDS OR THE EPITHELIAL BODIES

Sandstroem[34] discovered in 1880 small definite bodies consisting of cell masses in proximity to the thyroids. He gave them the name of parathyroid glandules. Sandstroem assumed that these cell masses represent undifferentiated embryonal thyroid tissue. Very little attention was paid to these bodies until 1892, when Gley[35] conceived the hypothesis that these bodies play an important rôle in the phenomena following the removal of the thyroids. On the basis of this hypothesis he discovered the important fact that after the removal in rabbits of the two free parathyroids, in addition to the removal of the thyroid glands, well-defined tetanic manifestations occur also in these animals. Removal of the thyroid glands alone or of the two parathyroids alone is not followed by any untoward symptoms. The communications of Gley were instrumental in bringing out a large number of researches dealing with the significance of the parathyroids, of which we shall mention here only two. A. Kohn[36] brought out by careful histologic investigations that there are most frequently four parathyroids, two of which are frequently imbedded in the tissue of the thyroid glands. The removal of the thyroids, therefore, also removes two of the parathyroids, and the removal of the thyroids and parathyroids in Gley's experiments meant complete removal of all the parathyroids. Kohn established further that the parathyroids do not represent an embryonic stage of the thyroid tissue, but are independent bodies composed of epithelial cells, and he suggested the name of epithelial bodies for the parathyroids. The second series of important researches were those of Vassale and Generali,[37] who reported a long series of experiments in which they succeeded in removing in animals either the thyroid tissue alone or the parathyroids alone, and arrived at the conclusion that the removal of the thyroids alone leads to myxedematous symptoms, and the removal of the epithelial bodies alone leads to tetanic symptoms. It cannot be claimed that this problem is even now completely solved. But the mass of evidence at hand is overwhelmingly in favor of the view, that the epithelial bodies are independent organs, the removal of which favors the onset of tetanic manifestations, and there can hardly be any doubt that the tetanic symptoms following in some cases the radical removal of the thyroids are due to the simultaneous removal of all the parathyroids or the profound interference with their vascular supply. The variability of the anatomic relations of these bodies with the thyroid glands explains the variations in the surgical and experimental results. As to the functional relations of these two organs to one another, some believe that they are entirely independent of one another; others again assume that there is a definite interdependence between thyroids and parathyroids; but as to the nature of interdependence some believe with Gley that it is supplementary; others that it is antagonistic in character. The subject is not yet settled and we need not dwell on it.

This new theoretical knowledge brought about by animal experimentation is commencing to bear important practical fruit. In the first place surgeons are at work to devise methods of operation which permit the removal of the thyroid without injuring or interfering with the blood-supply of all the parathyroids. Furthermore, surgical and medical methods are studied, by means of which the evil consequences can be adequately dealt with. Surgeons abroad and in this country[38] are trying to develop methods of grafting the parathyroids; they have been implanted in the abdominal cavity, in the spleen and in the cavities of the long bones. The success, however, will become complete when surgeons learn to graft the organs (and the thyroids) by means of an end-to-end vascular suture by the now well-known method which was introduced into surgery, especially by the experimental work of Alexis Carrel. There are also some promising medical methods of treatment for the deficiency of the parathyroids. According to Beebe,[39] the nucleoproteids of the parathyroids are capable of controlling the tetanic convulsions following the removal of the parathyroids. Furthermore, MacCallum and Voegtlin[40] discovered that the postoperative spasms can be controlled by the administration of calcium. Through the investigations of Erdheim[41] it was found that, in rats at least, the ablation of the epithelial bodies leads to some disturbance of the calcium metabolism. MacCallum and Voegtlin believe that the removal of the parathyroids leads to a deficiency of calcium in the body. While this theory may be incorrect, the fact is that the administration of calcium relieves the tetanic symptoms. MacCallum and Voegtlin established this fact in their experiments on animals. Calcium already has been used with success in postoperative tetany in human beings. In fact, calcium proved to be useful in the treatment of tetany in children due to other causes than the removal of the parathyroid.

Experimental medicine may well point with pride to this achievement. Little bits of tissue, the existence of which was not even known three decades ago, were recognized as organs of great importance to life and health, and medicine and surgery are already far on the road in learning how to avoid their injury and how to mend the evil consequences of such injuries. It is impossible to conceive how such knowledge could have been acquired without animal experimentation.

THE SUPRARENAL GLANDS

These ductless glands were described by Eustachius in 1543. Although thus known to medicine more than four centuries, our knowledge regarding their functional significance is, as stated above, of recent date. It began with a clinical observation. In 1855 Addison described a disease which is now known by his name, in which the adrenals were found to be affected. In the following year Brown-Séquard[42] published experiments showing that the removal of both capsules in animals leads invariably to an early death of the animal. The results of Brown-Séquard were, however, soon controverted by Phillipeaux[43] and by Harley,[44] who found that white rats survive the removal of the adrenals. These and other authors believed that the suprarenal capsules had no function to perform in post-uterine life and that death which sometimes followed removal of these glands was due to a stimulation of the adjoining nerves or to a peritoneal inflammation—that familiar interpretation which has obstructed the progress of many a discovery in physiology and medicine, and which was instrumental in postponing our knowledge of the significance of the suprarenal glands to life for nearly thirty years. After the revelations which came to light in the eighties regarding the importance of the thyroid glands, experiments on the suprarenal glands were taken up again by many observers. In the main the problem is now well settled; the suprarenal capsules are vital organs; after the removal of both organs from animals under most careful surgical precautions the animals die invariably at periods varying from a few hours to a few days. The most extensive and convincing series of experiments were carried out by Strehl and Weiss.[45] We know now also the reason why Phillipeaux and Harley could not confirm the observations of Brown-Séquard; the white rat possesses along its back inside the abdomen various accessory masses of cells similar to that of the suprarenal capsule. These accessory masses are apparently sufficient to keep up the function after the loss of the main bodies.

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[34] Sandstroem: Jahresb. f. Anat. u. Physiol. (Hoffmann and Schwalbe's), 1881.

[35] Gley: Arch. de physiol. norm. et path., 1892.

[36] Kohn, A.: Arch. f. mikroskop. Anat., Bd. 44, 1894.

[37] Vassale and Generali: Arch. ital. de biol., xxv, xxvi.

[38] Halsted: Jour. Exper. Med., xi.

[39] Beebe: Proc. Soc. Exper. Biol. and Med., iv, 64.

[40] MacCallum and Voegtlin: Bull. Johns Hopkins Hosp., March, 1908; Jour. Exper. Med., xi.

[41] Erdheim: Mitt. a. d. Grenzgeb. d. Med. u. Chir., xvi.

[42] Brown-Séquard: Compt. rend. Acad. d. Sc., 1856, xliii.

[43] Phillipeaux: Compt. rend. Acad. d. Sc., xliii, xliv.

[44] Harley: Med. Times and Gaz., 1857, p. 564.

Many studies were also carried on with injections of extracts of the suprarenals; these injections failed to keep up the life of the animals deprived of these glands. Neither has grafting of the suprarenals proved so far a real success. The experiments with injections of suprarenal extracts, however, brought to light a great discovery. It is the now familiar fact of the various and profound physiologic effects which suprarenal extract is capable of exerting on the animal body. It ought to be stated that this discovery also came about through the initiative of a clinician. Dr. Oliver administered to patients by the mouth extracts of various organs and observed by the clinical instruments which he employed that they exerted a definite influence on the blood-vessels. After a consultation with Professor Schäfer they started a systematic investigation on animals which led to their great discovery of adrenin.[5] We need not discuss here the great importance which this extract has attained as a therapeutic agent in medicine and surgery; it is now common knowledge.

This active extract is obtained from the medullary portion of the adrenals, secreted apparently by its specific cells. By various reactions and methods this extract has been traced, step by step, on its way from the cells to the blood in the vein of that gland. The internal secretion of this gland seems thus to have been, so to say, directly demonstrated. The cells of the medullary portion of the adrenals are similar to those found in the carotid gland, in Zuckerkandl's gland and in some sympathetic ganglia. They all have in common an affinity for chromic acid—hence the name chromaffin cells—and exert a similar physiologic action, for instance, a rise of blood pressure. The medullary portion shows also embryologically a relationship to the sympathetic nervous system. It is assumed by some[46] that the action of adrenin (adrenalin) on organs which are innervated by the dorso-lumbal portion of the sympathetic nervous system is similar to that of the action of the corresponding sympathetic nerve fibers on smooth muscle.

Reports are gradually increasing, showing the relations of the conditions of the medullary portion of the gland to various pathologic and toxicologic states (chloroform poisoning, shock, nephritis, etc.). We shall not dwell here on these details. We are in the midst of a great chapter, and the future has yet a great deal in store for our knowledge. In fact, we know as yet nothing of the significance of the cortex of the gland. But we have certainly learned a great deal about that gland in a remarkably short time. We know now that it is an absolutely vital organ, that it exerts its physiologic influence by emptying its secretion directly into the blood, and we have learned to obtain from it an extract which is of immense practical and scientific importance. These important facts have been learned by animal experimentation, and we could never have learned them in any other way.

HYPOPHYSIS

This gland is very small, weighs about half a gram, and is hidden away in a most inaccessible manner in the sella turcica. The older anatomists ascribed to it the fanciful function of secreting mucus, hence the term of pituitary gland. In more recent times—until 1886—it was looked on as an evolutionary remnant, a sort of useless appendix of the brain. It consists of two parts, a larger anterior part, containing glandular epithelial cells, and a posterior part, which contains some nervous elements and no epithelial cells. Since Rathke (1833) and Mihalkovits (1874) it has been generally recognized that both parts are embryonically developed from different origins; the anterior part coming from the posterior pharynx and the posterior part from the midbrain.

It was again clinical medicine which began to shed light on the function of the pituitary body. In 1886 P. Marie[47] called attention to the occurrence of a new disease which he termed acromegaly and which was found to be associated with tumors of the hypophysis. The most striking sign of this disease is the overgrowth of certain parts of the skeleton, especially the extremities and the lower jaw; hypertrophy of the connective tissue is also present. The statements of Marie were confirmed by many other observers. Furthermore, it was found that gigantism, that is, an increase of growth which leads to unusual stature, is in most cases associated with tumors of the pituitary body and a concomitant enlargement of the sella turcica. These clinical observations, which clearly indicated that the pituitary gland is in some way connected with the growth of the body and exerts, therefore, a physiologic function on the growing and grown-up animal organism, led to various series of experimentation, of which we shall mention here briefly only two. In the first place, the attempt was made to study the effect of the removal of the gland. Until a few years ago these attempts seemed to be futile, as the various investigators obtained contradictory results, which was not surprising considering the immense difficulties with which the experimenters were confronted in their attempt to reach that hidden gland without endangering the life of the animal. About three years ago, however, Paulesco[48] worked out an apparently satisfactory method of getting to the pituitary body through the temporal bone. The results, which were arrived at by Paulesco himself and which were extensively confirmed, among others by Harvey Cushing,[49] seem to be uniform and reliable. Briefly stated, they are as follows: Complete removal of the hypophysis leads invariably to the death of the animal within forty-eight hours after the operation. Reaching the gland and handling it has no effect. Neither does the complete removal of the posterior part seem to have any effect. On the other hand, the complete removal of the anterior part has the same invariably fatal effect as the complete removal of the entire gland. Leaving behind a small portion of the anterior part saves the animal's life. We thus have positive evidence that the hypophysis, like the thyroids, parathyroids and the suprarenal capsules, is an organ indispensable to the life and health of the animal.

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[45] Strehl and Weiss: Arch. f. d. ges. Physiol. (Pflueger's) lxxxiv, 107.

[46] See Elliot: Jour. Physiol., xxxii.

[47] Marie: Rev. de méd., 1886, p. 298.

[48] Paulesco: Jour. de physiol., 1907, ix.

[49] Cushing: The Journal A. M. A., 1909, liii, 249.

The second line of investigation, which was carried out by Schäfer[50] and his associates, by Howell[51] in this country, and by many other investigators, deals with the effects of injections of extracts of the pituitary body. The results as they stand to-day are as follows: The extracts cannot save the life of the animal after removal of the gland. Extracts made of the anterior part exert no definite influence on the animal. On the other hand, extracts made of the posterior part have a definite influence on blood-pressure and, independently of the blood-pressure, also on the urinary secretion. We need not enter here into the details of the nature of this influence, but it is in no way comparable with the marvelous influence of the extract made of the medullary portion of the adrenals. The striking outcome of these investigations for the present is that the part which is essential to life exerts no influence by its extract, and the part which exerts such an influence seems to be unessential to life. It is evident that the action of the normal organ is not identical with the action of its extracts—a lesson which is not yet well learned by some writers who deal with the significance of iodothyrin or adrenin.

With reference to the relation of tumors of the hypophysis to acromegaly and gigantism, we have at present still two contending theories. One assumes that the changes in the growth of the organism are due to a destruction or diminution of the function of the gland; the other theory assumes that the increase of growth is due to a greater stimulation of the function of the gland, assuming that the tumor, at least at its beginning, is of the nature of hyperplasia and benign in character.

As to the therapeutic application of these results, we have stated already that injection of the extract is of no avail in saving the life of the animal after the complete removal of the hypophysis. I am not aware of any attempts to graft this gland. But there is very promising beginning in the surgical treatment of the diseases due to the pathologic condition of the hypophysis. There are already on record a few successful cases of removal of tumors of the pituitary gland in which, of course, some fragments of the gland were purposely left behind. We are here only at the threshold of a new era.

Recently good results were also reported from treatment of shock, uterine hemorrhages, etc., by injection of extracts from the infundibular portion of the hypophysis.

THE THYMUS

It is true that this ductless gland gradually atrophies during extrauterine life, but it is also true that it persists for a long time after birth. With our present knowledge of the importance of the other ductless glands we are hardly justified in assuming that the thymus is a worthless fetal remnant. But we have to acknowledge that as yet there are no reliable observations or experiments which indicate clearly that the thymus has a function in postuterine life.

(*To be continued*)

Pemphigus.—There is need of further investigation of the entire group of pemphigus eruptions, along the lines of modern research; it is not sufficient to merely employ observation. The following studies should be made: 1. General metabolism. 2. Toxicity of sweat. 3. Bacteriologic examination of blood, bullas, urine, feces. 4. Agglutinating power of blood.—H. H. Hazen, in *Journal of Cutaneous Diseases.*

BILHARZIASIS IN THE NEW WORLD *

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INDIANAPOLIS

The building of the Panama Canal by the United States government has furnished an excellent opportunity for the exhaustive medical study of the surrounding races imported and engaged in its construction. A group of West Indian Islands, Central America, and the northern and western parts of South America, have been heavily drawn on for contract laborers. The systems of physical, clinical and pathologic diagnoses carried on in its great base hospitals at Colon, and especially at Ancon, have furnished the necessary data for the determination of almost every known tropical disease indigenous to these races. In this research of medicine the determination of the intestinal flora and parasitology has engaged by extended microscopic research its fair share of study in patients representative of a tropical section, and in no essential way do the results seem to differ from discoveries made in the tropics of the Old World.

Among these intestinal parasitic diseases uncinariasis (hookworm infection) has been far the most prevalent. Tricocephaliasis and ascariasis are very common. Amebiasis is frequent, but not so fatal as in the Philippines. The *Cercomonas intestinalis* (a ciliated monad) is very frequent; a few scattered cases of *Balentidium coli* have been found. The various forms of *Tœnia*, the *Tœnia saginata, Tœnia solium* and *Bothriocephalus latus,* are well represented among the parasites of the Spanish laborers from the Mediterranean region.

The three first-mentioned diseases and amebiasis are already well known in the Southern states, where in North and South Carolina, eastern Tennessee and Georgia, and the entire fringe of gulf states, ankylostoma disease (hook-worm) is of comparatively common occurrence. Amebiasis is frequently observed in southern Louisiana and Texas, notably in New Orleans, Galveston and other gulf ports. Trichocephaliasis is not so frequently discovered, while the subject of this paper, bilharziasis, is unknown in the United States and until very recently even in America itself.

Stiles says that the human blood-fluke *Bilharzia* has been found but twice in America, once in a "Midway" patient in Chicago, during the world's fair, and once in New York City. Another case is recorded from Georgia (the patient a Boer), with evident infection outside of the United States. There is no evidence or report of cases showing that the disease has any foothold outside of the tropics, either in America or the Old World.

Among these interesting parasites discovered in the stool examination work on the isthmus most unexpectedly turns up the *Schistosoma hœmatobium, Bilharzia hœmatobium, Distoma hœmatobium,* the parasite of bilharzia disease, or the "disease of Egypt." Now rediscovered and destined to take its prominent place in the intestinal parasitology of the New World, until as late as 1904 its appearance in America was unknown. Scheube, in his "Diseases of Warm Countries," speaks of it as a disease only of the Old World, notably Egypt, where one-half the inhabitants suffer from it. Allbutt, in his "System of Medicine," says: "The distribution of bilharzia is Ethiopic." The "Encyclopedia of Medicine" and Buck's "Reference Hand-book of Medical Sciences" do not mention its appearance in the Americas. Manson, in "Tropical Medicine," fails to note its existence in America until his latest book, in 1904. Jackson, in his work on tropical medicine, 1906, is the first author to note its comparative frequency on the American continent and its dependencies.

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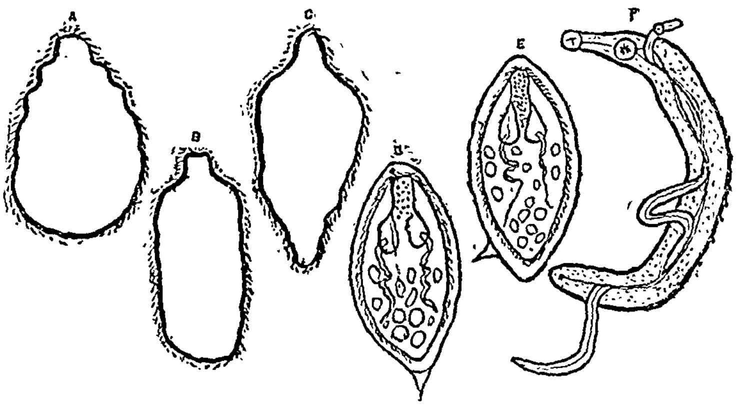
[50] Schäfer: Croonian Lecture, Proc. Roy. Soc., London, 1909, lxxxi.
[51] Howell: Jour. Exper. Med., 1898, iii.

* Read before the Isthmian Canal Zone Medical Association, April, 1909.

GEOGRAPHICAL DISTRIBUTION

Formerly supposed to be restricted exclusively in its habitat to Africa, where, as just stated, in Egypt it infects a majority of her people, and is found at one-third of all autopsies, it has spread to the natives and residents of the Uganda, Congo, Tunis, Abyssinia, Sudan, Natal and the interior. It is also found in Mecca, which, through the pilgrimages, is the distributing-point for Syria, Persia and Arabia. In India and China it is now known to have a foothold in the port cities, and the Philippines are not exempt. On the Isthmus of Panama, according to statistical records obtained from the Chief Sanitary Office, it has been reported 104 times, as follows: 3 times in 1904, 4 times in 1905, 9 times in 1906, 62 times in 1907, 19 times in 1908, and 7 times in 1909. These statistics are obtained from approximately 30,000 stool examinations.

Its geographical or racial frequency has been observed by me to be in the following order: First, the French group of islands lead; Guadaloupe and Martinique have furnished the greatest proportion of all cases. Following these, Antigua, Trinidad, Demarara, Barbadoes and Jamaica, with least frequency in the two last islands. Dutch Guiana has also furnished one or two cases, and probably more would be found in the inhabitants of the three Guianas were it not for the small number of laborers hailing from that region. Porto Rico also furnishes an infecting center (report of B. K. Ashford).



A, B, C, Bilharzia embryos, showing alterations in shape (after hatching) by which locomotion is accomplished; D, bilharzia ovum from urine, showing terminal arrangement of spine at posterior extremity; E, bilharzia ovum from feces, showing lateral arrangement of spine near posterior extremity; F, *Bilharzia hæmatobium* trematode, showing male and female worm and relation of sexes.

The paucity of cases discovered and discoverable in America, compared with old-world frequency, gives rise to the inference that bilharzia was originally an old-world disease. It has been suggested that its origin on this continent was the importation of Hindoo laborers for work in English colonies in Trinidad and British Guiana. This may have been the deciding initial focus. Again, it is to be remembered that the negroes of the New World were originally imported from Africa.

If either view be accepted, the existence of the parasite in America has been of comparatively short duration—at the longest not over 200 years.

THE STRUCTURE AND LIFE-HISTORY OF THE HÆMATOBIUM

Unlike most trematodes, which are hermaphrodite, this is a two-sexed organism. Milk-white in appearance, round and pointed at both ends, it measures about 1 cm. in length—one-third of an inch. Both sexes are provided with suckers. The female is longer than the male. The anterior half is white in color, the posterior half is gray with brown longitudinal stripings, which indicate the position of the intestinal canals. The worm is hematophagous, and the intestine is frequently filled with blood, which accounts for its darker color posteriorly. The anterior part of the body of the male is tapered off and flattened, while the thick posterior part of the body has a cylindrical appearance with its edges curving inward toward the abdomen, whereby a groove or not quite closed tube—the canalis gynæcophorus—is formed, and which serves for the reception of the thin female worm. At the termination of this canal a sexual opening is situated in the male. The sexual fluid is discharged into the canal and taken up through the sheath of the female by imbibition. The back surface of the male is provided with small spinous papillæ, and by this means the males cling to the walls of the veins during their wanderings in search of a permanent place of residence, which they find mainly in the pelvis.

When young the sexes live apart; when mature the female enters the gynecophoric groove or canal of the male. Within this canal the female remains completely hidden at times. At other times, owing to its greater length, it protrudes, mainly the posterior extremity, from the gynecophoric groove.

The reproductive units are eggs, which have the form of a compressed spindle somewhat inflated in the middle. They are slightly yellowish in color and measure 0.16 cm. in length—about 1/200 of an inch. Compared with other ova they are about three times the length of the *Uncinaria,* twice the size of the *Ascaris,* and six times that of the *Trichocephalus dispar.* At the posterior pole one finds a short, irregular tip, a spine, which in the eggs discharged in urine is terminal. In those discharged from the intestines it is generally slightly lateral. Each egg contains a mature embryo, cylindrical in form with a conical anterior tip surrounded with numerous fine cilia. A rudimentary intestinal canal and the germ cells posterior are readily distinguished.

These embryos are easily hatched by placing the eggs in fresh water. In a variable length of time, usually of short duration, a hazy motion is exhibited at the anterior extremity of the egg. This is caused by the action of numerous cilia near the mouth. Rupture of the placenta and shell generally occurs near the middle and in a longitudinal direction. The theory has been advanced that the cause of hatching is the lessened specific gravity of the surrounding media, the urine and feces. The activity of the embryos is very great, and even under the microscope they remain alive for a considerable period of time. I have observed motility for at least six hours after hatching them. This movement of the cilia is not necessary for locomotion, as this is brought about by alteration of the body shape.

Fresh water seems to be essential for the birth and continued existence of the embryo, but beyond this fact in the life-history and cycle of the parasite we know little or nothing. What or where its special intermediary habitat is before re-entrance to the human host is entirely speculative and conjectural. The fact that it seems to live only in fresh water and for only two or three days would indicate, however, that this intermediate host is a mussel, snail, fish or fresh-water vegetable.

The life-history of the worm is a long one. Evidence of infection has presented itself in patients who have long resided away from the infecting area. In one case in which the patient left his native country, Egypt, as a boy, the ova were still found nine years afterward in the last drops of his urine, although all signs of hematuria had stopped.

ETIOLOGY

Natives are known to be more often attacked than foreigners, males than females and country than city people. The manner of infection is conjectural. It is presumed that the parasite is taken into the stomach either with impure drinking-water or some mollusc, fish, or vegetable. This is the view of Bilharz. Others ascribe it to bathing. The greater frequency of it in males, those who work in water most, as farmers, fishers or gardeners, favors the idea that, like guinea-worm disease, it may be acquired by bathing or working in or with water; while its frequency in country people and its comparative rarity in cities like Cairo and Alexandria, which have a purification system for their water-supply, favors the belief that it is a water-borne disease. In Egypt one observer notes that it is commonest in the summer months after the overflow of the Nile, but others fail to corroborate this view. Its period of incubation in the human being appears to be short; and symptoms of the disease have appeared within four weeks of the possibility of infection.

HABITAT IN MAN AND PATHOLOGY

The portal vein is the principal habitat of the adult parasite, but the young worms are also found in the liver, in the intestinal veins, in the bladder walls, and pelvic blood-vessels of both sexes. In the lungs the blocking of blood-vessels from the ova and surrounding infiltrations give rise to deposits, which may be mistaken for tuberculous deposits. Cirrhosis of the liver and biliary calculi may be caused by the presence of the parasite. Serious disturbances arise from the attachment of the parasites to the walls of the urinary passage, or their adjacent organs. Dangerous hemorrhage may occur in the bladder, owing to irritation of the fluke or its terminal-pointed ova. Cystitis and urethritis are common complications and often the parasite is the starting-place of stone. Observation of one series of cases, that of Collordi in Egypt, demonstrated bilharzia as the starting-point in 80 per cent. of a series of cases of lithiasis. In the severer cases there may exist, with extension, the entire symptom-complex of "surgical kidney" or "surgical bladder." When the intestinal tract is involved, the symptoms resemble those of tropical dysentery. Several such cases have appeared in the wards of Ancon Hospital. In the severe cases nutrition suffers and the patient becomes run-down and cachectic. A patient recently admitted to Ward 20 beautifully illustrated the destructive tendencies of the disease. The following is a report of this case:

Case 1.—The patient, W. H., chart No. 54215, black, an Antiguan, aged 35, was admitted into Ancon Hospital Feb. 10, 1909. He had a sharp attack of fever, headache and chills on admission, temperature 104, pulse 120, respirations 28, with tender spleen and liver, a badly coated tongue, and bronchitis. Glandular enlargement was general, and he had a chronic orchitis on the left side. The blood was negative for the malaria plasmodium, and all urine examinations were negative for bilharzia or evidence of nephritis. Stool examination showed numerous specimens of bilharzia, with lateral-spined ova, and a few of uncinaria. The clinical malaria yielded rapidly to appropriate medication—quinin grains 30 daily—but about the tenth day he developed some dysentery. Daily examinations of the stool showed the presence of pus, mucus, epithelial cells and large numbers of bilharzia. Under bismuth, dram doses three times daily the dysentery cleared up, and the patient left the hospital on March 4, three and one-half weeks after admission.

The patient complained that at least once a month he had attacks of dysentery and passed blood and mucus. He is still under observation for bilharziasis and is passing the ova in large numbers.

There is no doubt in my mind that this is one of the group of cases in which the trematode now under discussion plays an important part in provoking a recurrent dysentery, and thereby temporarily disables the individual.

Among other cases of bilharziasis admitted into Ancon may be cited the following:

Case 2.—Patient 31185, A. S., was a Barbadian, aged 24; he was admitted to Ancon Hospital, Sept. 5, 1907, with the following history:

On the isthmus seven months, second time in the hospital; sick for four days with dysentery, passing mucus and blood, six or seven stools in the day, and the same at night; headache, fever, vomit and backache—malarial symptoms. Abdomen tender, not tympanitic; lungs, liver, spleen and heart, negative. Tongue coated; blood-vessels markedly sclerotic; urine with a trace of albumin and hyaline and granular casts, specific gravity, 1010. Temperature was 101.8; pulse 102.

Stool examination showed the presence of ascaris ova, bilharzia ova, blood, pus, and epithelium. Fever declined until the seventh day after admission, when it reached normal. The stool record showed nine stools the day of admission; fourteen the second day; eleven the third; ten the fourth; nine the fifth; ten the sixth; nine the seventh; five the eighth; three the ninth, and an average of two or three a day until the patient was discharged on the twenty-eighth day after admission. Milk diet, saline irrigations, twice daily, discontinued on the tenth day, and quinin grains 30 daily, with absolute rest in bed, was the line of treatment followed. A Widal test on the fifth day was negative. Recovery was uneventful, and the patient left the hospital on October 3, twenty-eight days after admission.

Interest in this case is of paramount importance, because of the fact that the bilharzia ova discovered in the stool were terminal-spined. This is the second case of which I have knowledge in which terminal-spined bilharzia ova have been found in the stool examinations of patients admitted into Ancon Hospital. The diagnosis in this case was corroborated by at least two other physicians working in the same laboratory at the same time—Dr. J. P. Bates and Dr. James Melton.

In order that no mistake might be made as to the source of the specimen, special arrangements were made to insure its accuracy of origin. The specimen of stool examined on September 7 was obtained after special instructions had been given the orderly to see that there should be no mixing of stool or urinary evacuations, with the result that on microscopic examination, terminal-spined bilharzia ova were again found in the stool. Further to exclude the probability of urinary contaminations, specimens of urine were obtained on September 5, 7, 13 and 16 and centrifuged, with the result that they were all negative for bilharzia ova. The extraordinary interest which attaches to this particular case rests on the fact that, according to the literature, terminal-spined bilharzia ova are found practically only in urine, and intestinal bilharzia are almost always lateral-spined. The "Reference Handbook of Medical Science" goes so far as to define the difference that urinary bilharzia ova always are terminal-spined, and intestinal bilharzia ova always lateral-spined. Manson does not agree with this, nor does the citation of the above case comport with the previous opinion.

Through the courtesy of Dr. John Lawler, of Ancon Hospital, I have the privilege of reporting another case which I studied carefully. The patient is an inmate of the insane asylum, a female. Lateral-spined bilharzia ova have been found in the urine of this patient, as well as in the stool. As no fistula has been discovered between the urinary and intestinal tracts, it is a fair presumption that the ova by some mistake in their wanderings reached the urinary instead of the intestinal tract. Fecal matter is not passed in the urinary discharges.

As it is against precedent and the literature for us to believe that lateral-spined ova are normally passed into the bladder, it will take an internal examination to clear this pathologic mystery. The patient is tuberculous and her demise expected within a year; she will undoubtedly yield an interesting autopsy.

A study of her case evokes the interesting discussion concerning a duality of urinary and intestinal bilharziasis. Are there two distinct diseases caused by different trematodes? This is a much-mooted point by workers on this subject at the present time.

It is explained that the difference in the position of the spines is brought about by different mechanical conditions in which parental worms ovulate, or by differences of pressure in altering the position of the ovum in respect to the duct of the shell-gland. Manson questions the value, if any, of this mechanical theory, and boldly states his belief that difference of the eggs indicates difference of species. In furtherance of his view he recalls a recent discovery of an entirely different species found in Asia, the *Schistosoma cattoi*. This new fluke, like the more familiar *Bilharzia,* also infests the portal circulation, but, unlike *Bilharzia,* it lies on the arterial side of the circulation. Further, its eggs bear no spine at all, although, like the lateral-spined *Bilharzia,* they are always extruded into the bowel. In addition, its life-history is better known, and its discovery in the domestic animals, notably the cat, may give a further clew to the discovery of the life-history of its more dangerous rival, the *Hæmatobium*.

PROGNOSIS AND TREATMENT

As regards prognosis and treatment, the disease, though obdurate and relapsing, is generally not fatal. So far on the isthmus the discovery of the conditon has been mainly only an incident of routine stool examination, and it plays little or no rôle in the patient's appearance at the hospital. Its severity depends on the degree of infection. In cases of moderate intensity, appropriate treatment of a general character is sufficient to effect amelioration, and in many cases the disease is self-terminating. Anthelmintics and other medicaments of similar nature have no place in treatment.

In urinary bilharziasis the watchword should be to beware of surgical interference. An examination of the urine will quickly make the diagnosis, and the disease, except for grave complications, should be left alone.

In conclusion, we may note that the expansion of medical America toward the tropics has brought into prominence peculiar worm and parasitic bowel diseases of man. To an already long list of American parasites we may now add *Bilharzia*.

The study of a branch of medicine for long relegated to legends of ancient pathology and almost mythology with some nations will take a new impetus from the American exploitation of the tropics in Panama. And inasmuch as the increasing frequency of relationship between our own country and the South puts us under the obligation of acquiring some knowledge of an exotic pathology, in which parasitic diseases, especially of the bowel, play a prominent rôle, it is not amiss that careful study be devoted in America to this distasteful but essential branch of medical knowledge, and that all cases should be reported.

Note.—In the discussion of this paper, Dr. Henry Carter, director of hospitals on the Isthmus of Panama, reported a case of bilharziasis which he observed in San José General Hospital in Costa Rico. This case was attended with severe dysentery, and the ova on microscopic examination were especially numerous. Dr. Samuel T. Darling of Ancon Hospital also reported a case in a man who had but recently come from Brazil. Since the presentation of this paper I have had a case reported to me from Lima, Peru. This widespread distribution of bilharziasis in America indicates that it is another pandemic tropical disease, though fortunately at present it is of slight economic importance.

330 Newton Claypool Building.

GONORRHEA: PRIMARY FACIAL INFECTION WITH AXILLARY INVOLVEMENT

JULIUS HAROLD HURST, M.D.
SANTA BARBARA, CAL.

An unusual and interesting case of gonorrhea involving the lymphatic glands surrounding the external iliac artery was reported in The Journal about four and a half years ago by Dr. J. A. Nydegger[1] of the U. S. Public Health and Marine Hospital Service; and last year Dr. E. F. Wright[2] reported a case of sycosis apparently of gonorrheal origin. The following case, while of itself interesting as a curiosity, acquires additional interest from the fact that it appears to fill in, more or less appropriately, the gap between the two above recorded observations. At the same time it seems to open up the question of the regions tributary to the axillary lymphatic glands. All medical science is built on the observations and deductions of cause and effect, and any link of evidence seeming to verify causal relationship is necessary to the chain. This is my excuse for reporting the following case.

History.—On Feb. 10, 1910, a man, aged 36, married, with two children, to my own knowledge of good habits and denying any previous gonorrheal infection, presented himself complaining of a swelling in the upper part of the axilla just posterior to the outer border of the pectoralis major. He had been seen by another physician not actively practicing, who had diagnosed the swelling as axillary abscess, and referred the patient to me to open it. The history was to the effect that it had been first observed six days before, when about the size of a marble, and (so the patient averred), soft.

Examination.—The swelling was about the size of a hen's egg, ovoid, resembling it in shape. There was no fluctuation, but rather a leathery tough feeling, with no redness or heat apparent. It was intensely tender and seemed adherent to the overlying skin in the central portions. The patient's temperature at the time I saw him (late afternoon) was 101.6, pulse about eighty. A blood examination showed hemoglobin and red cells practically normal, with a leucocytosis of 17,000; the differential count showed polynuclears 76 per cent., small mononuclears 8 per cent., large 14 per cent., eosinophils 2 per cent. The patient denied any history of injury to the arm or breast on the affected side, and the closest examination failed to reveal even the slightest scratch in the regions supposed to be tributary to the axillary lymphatic system. The only abnormalities that could be found were four small pimples; the lowest in the median line just below the chin, three-quarters of an inch above the upper border of the thyroid cartilage; two on the side of the face about an inch posterior to, and a little higher in level than, the angle of the mouth; and the fourth, almost entirely healed, in the temporal region at the hair margin. All were on the same right side of the body as the affected gland. A little pus could be squeezed out from the three lowest; smears were made and all were cleaned out with phenol. Looking again more carefully at the axillary swelling, I felt convinced that pus was present, and incised quite deeply into the center of the swelling. No pus was found, and it was not considered advisable under existing circumstances to undertake any extensive dissection of the axilla in the search for it, the patient's financial status being such as to preclude removal to a hospital until it was more certainly demanded. The incision cut through a mass of swollen and apparently hypertrophied cutaneous tissue, and the appearance given was such that one was inclined to doubt if any pus was present deeper, whether one had not rather to deal with a cellulitis.

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[1] Nydegger, James A.: An Unusual Gonorrheal Complication, The Journal A. M. A., Sept. 23, 1905, xlv, 920.

[2] Wright, Edward F.: A Case of Sycosis, Probably Due to the Gonococcus, The Journal A. M. A., June 19, 1909, lii, 1996.

Course of Disease.—I was loath to relinquish the idea of pus, and for five days hot antiseptic poultices were constantly applied, the incision was kept open and considerable serum drained therefrom. During this period the patient was seen twice daily, and remained in about the same general condition. The morning temperature would be normal, the evening rising to 100.5 or 101.8 the highest observed. The tumor in the axilla grew slowly and steadily circumferentially; but, possibly by contrast with its increased area, seemed flatter. It was, however, much less tender, and could be grasped between the thumb and four fingers much as one could grasp the detached heel of a slipper, which it much resembled in size, thickness and leathery consistency. In the meantime the bacteriologic examination of the material squeezed from the pimples had shown the presence of a mixed infection of staphylococci and diplococci, chiefly intracellular, which further examination showed to be gonococci. Working on this clew we got from the patient a more complete history, to the effect that he had not used any towels but his own for some months past; that he always shaved himself; had not lent his razor to another, or used any but his own. Under still more careful questioning he remembered that he had noticed the first pimple, that highest on the forehead, just about a week after having his hair cut in a certain barber-shop, and that at that time he had had a scratch on the head in that region. The lower pimples had appeared consecutively in the order of their arrangement from above downward. These data took some time to acquire; during the interval blood examinations were made daily. The leucocytosis remained almost stationary, falling a little. On the fifth day, the incision was slightly enlarged without result so far as finding pus was concerned, and a dry cup was applied for possibly one hour. The wound was dressed and the patient sent home. At the next visit he reported that the dressing felt wet, and he was of the opinion that something had broken. The wound was found to be exuding a considerable amount, possibly a tablespoonful, of thick yellowish pus. The wound was again cupped, irrigated and under appropriate antiseptic treatment made an uneventful recovery. The pus obtained showed on bacteriologic examination abundant gonococci.

I am indebted to Dr. E. C. Gilbert, of Santa Barbara, who saw the case with me and followed it throughout, for much help in arriving at an accurate diagnosis and in searching the literature; also to Dr. E. L. Leonard and Dr. L. B. Stookey of the Pathological Laboratory of the City of Los Angeles for independently confirming the bacteriologic findings.

About a year previously I saw a somewhat similar case in the person of a boy presenting himself with a leathery swelling of the whole lower lip which had started from a pimple just below one corner of the mouth, the pus having spread and tunneled across the lip to the opposite corner. Here again the offending organism was the gonococcus, and working on this clue the infection was traced to a camp towel used also by a boy suffering from urethral discharge, presumptively gonorrheal.

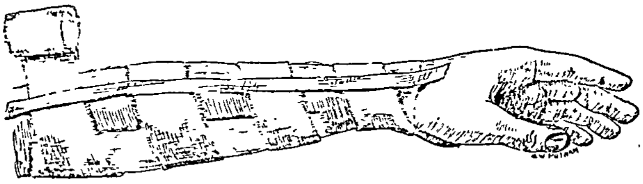
1225 State Street

A FIRM BANDAGE

G. W. PUTNAM, M.D.
AURORA, ILL.

We all have our troubles attempting to fix a bandage on the limb or body of a patient who is not disabled for work and who is engaged in active labor; this is especially difficult in case of the forearm, elbow, calf, knee and thigh. We all have tried fixing the completed bandage with adhesive strips or safety-pins, but, in spite of these, we are generally dismayed to see the condition of the bandage when the patient returns to our office for redressing of the parts afflicted. The bandages do not hold because they have no firm foundation on which to hold; they slip and slide with the motion of the body until they become loosened and untidy. Working on this hypothesis, I have devised a method of applying a bandage in these cases, which I have found efficient.

Take, for example, a burn on the ventral surface of the forearm. Cover the wound with the proper dressing, fix a 1½-inch roller bandage with three turns at the wrist; make turns of the roller until the elbow is reached, leaving about a 1-inch space between each turn. Take three adhesive strips ½ inch wide and long enough to extend 1 inch beyond the approximal and distal turns of the bandage, and apply them over the bandage and arm on the lateral and dorsal regions of the forearm, parallel to the long axis and extending onto the hand and about the elbow-joint. Now return to the wrist with a few turns of the roller and finish the bandage as a reverse spiral and fix with a pin or tie. Carrying out this idea of making a fixed foundation, very substantial bandages can be applied to almost any region of the body.



A firm bandage.

A NEW MODE OF FORMATION OF BETA-OXYBUTYRIC ACID IN THE ANIMAL ORGANISM *

H. D. DAKIN
NEW YORK

Beta-oxybutyric acid is very generally believed to be formed in the animal organism by the oxidation of butyric acid and normally undergoes further oxidation with production of aceto-acetic acid, which in part loses carbon dioxid with formation of acetone. The changes may be represented as follows:

$$\underset{\text{(butyric acid)}}{CH_3.CH_2.CH_2.COOH} \rightarrow \underset{\text{(beta-oxybutyric acid)}}{CH_3.CH(OH).CH_2.COOH} \rightarrow$$

$$\underset{\text{(aceto-acetic acid)}}{CH_3.CO.CH_2.COOH} \rightarrow \underset{\text{(acetone)}}{CH_3.CO.CH_3.+CO_2}$$

The oxidation of beta-oxybutyric acid to aceto-acetic acid has been shown[1] to be effected by an enzyme present in the liver which may be roughly purified and whose action is accelerated by the addition of oxyhemoglobin. The object of the following note is to record the results of experiments showing that the reverse change, namely, the reduction of aceto-acetic acid to beta-oxybutyric acid also occurs in the animal organism.

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* From the Laboratory of Dr. C. A. Herter, New York.

[1] Wakeman and Dakin: The Decomposition of Beta-oxybutyric Acid and Aceto-acetic Acid by Enzymes of the Liver, Jour. Biol. Chem., 1909, vi, 373.

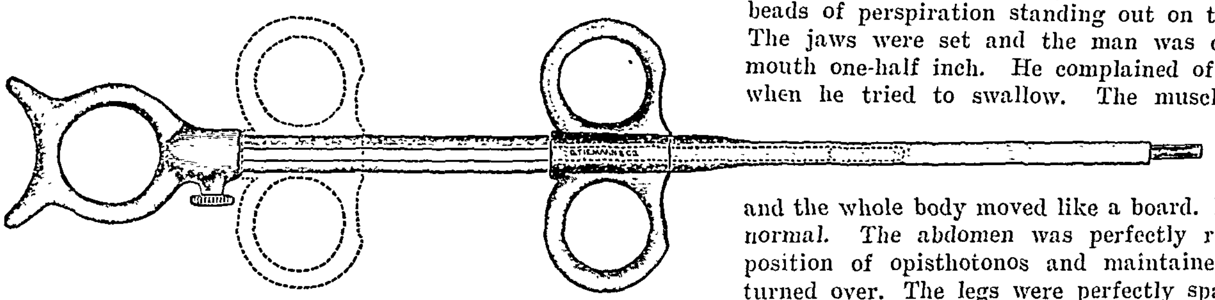
Sodium aceto-acetate prepared by the saponification of aceto-acetic ester with caustic soda was injected intravenously into cats and small dogs. In experiments in which a quantity of about 10 gm. of aceto-acetic acid in the form of its sodium salt (8 per cent. solution) was injected intravenously in the course of four to six hours, the urine secreted during this period was found to contain over 1 gram of levo beta-oxybutyric acid. Beta-oxybutyric acid was extracted with ether and identified by its levo-rotation, by its conversion into crotonic acid, melting point 73° C. and by its oxidation to acetone with chromic acid.

It is clear, therefore, that beta-oxybutyric acid and aceto-acetic acid are mutually interconvertible in the animal organism according to whether oxidation or reduction takes place. Since beta-oxybutyric acid, when present in the urine of diabetics, is almost invariably accompanied by aceto-acetic acid, it is possible that some part of the former acid may be derived by the reduction of aceto-acetic acid. An attempt will be made to investigate this question experimentally. It is possible that the reduction of aceto-acetic acid to beta-oxybutyric acid may represent a step in the hitherto unknown series of reducing reactions which must be associated with the synthesis of fat from simpler substances.

A SIMPLE TONSIL SNARE

CURTIS C. EVES, M.D.
PHILADELPHIA

In constructing the instrument shown in the accompanying illustration it was my desire to produce a tonsil snare simple in construction yet efficient in every way.



A simple tonsil snare.

The snare is composed of three parts: a hollow seamless steel canula of two sizes; the upper larger size has two bilateral slits extending the whole length to allow the second piece, the finger holds, attachment to the wire-carrier which slides easily through the smaller size of the canula. The holes in the end of the wire-carrier are made conoidal in shape, thus preventing any slipping of the wire. The third piece fits like a cap over the large end of the canula, and has provision for the reception of both thumbs; it is held in place by a small thumb screw. By loosening this screw, the snare is easily taken apart, in three pieces, for cleaning.

The snare has no screw or ratchet apparatus; the necessity for these is done away with in the construction by the size of the canula, the style of grip and the centric pull.

In a series of over five hundred pairs of tonsils removed from adults and children, which were dissected free from adhesions, the snare proved satisfactory in every case. By grasping the instrument with the first two fingers and the thumb of the right hand, the operator has perfect control of the wire loop, which can be accurately adjusted and tightened in place by shortening the grip of the right hand. The left hand can grasp the snare in a similar manner to that of the right, with the fingers in the concavities below the rings and the thumb in the concavity above the end ring.

By firmly tightening the grip of both hands the tonsil is easily removed.

1834 Pine Street.

HYSTERICAL TETANUS

DAVID B. ROBINSON, M.D.
KANSAS CITY, MO.

The following case may prove of interest since it shows hysteria in one of its most unusual and interesting phases.

Patient.—C. M., male, aged about 40, was admitted to the wards of the Philadelphia General Hospital suffering from what was suspected to be tetanus. The nearness to the Fourth of July, together with the clinical aspect and examination of the case all helped strengthen this diagnosis.

Condition on Admission to Hospital.—On admission, July 11, 1909, the patient complained of inability to open the mouth, with rigidity of the muscles of the neck, back, legs and abdomen. No wound was demonstrable on any part of the body. Temperature was 101 F., pulse 96, and respiration 24.

History.—Family and previous history were negative. He stated that he had used alcohol and tobacco to excess all his life. He was drunk on the Fourth of July and slept in a stable that night. The following morning his throat felt sore and he had some pain in the abdomen. On the next day his jaw became stiff and later the muscles of his back, abdomen and legs. The next day he was unable to walk and had to go to bed. He had great difficulty in swallowing. He was markedly constipated.

Physical Examination.—The patient was well-developed and well-nourished. All the muscles of the body except the arm and facial muscles were rigid. The skin was very moist, large beads of perspiration standing out on the forehead and neck. The jaws were set and the man was only able to open his mouth one-half inch. He complained of a great deal of pain when he tried to swallow. The muscles of the neck were spastic. He could be picked up by the back of the head and the whole body moved like a board. Heart and lungs were normal. The abdomen was perfectly rigid. He lay in the position of opisthotonos and maintained this rigidity when turned over. The legs were perfectly spastic, and he held his feet in a position of talipes equinovarus. There was no ankle or patellar clonus; no Babinski sign. Sensation to touch, pain and temperature was normal all over body. There was incontinence of urine.

Treatment.—The patient was at once given 30 c.c. of antitetanic serum and 20 c.c. repeated for several doses with no apparent change for the better. On the second day, the actual cautery, with suggestion, was tried, with decided change in the patient's condition. This treatment was continued for three or four days with such good results that the spasticity almost entirely disappeared and the patient could move about at will. In five days he was discharged, walking from the hospital and eating in a normal manner.

The locking of the jaw, the extreme rigidity of the trunk and legs with opisthotonos, extreme constipation, characteristic temperature and pulse with clammy skin and profuse perspiration all go to make up the symptom-complex of tetanus, the convulsions alone being absent. That the patient responded so promptly to suggestion through the medium of the actual cautery is very interesting.

603 Bryant Building.

A CASE OF SPLENOMYELOGENOUS LEUCEMIA IN AN IGORROTE

F. W. VINCENT, M.D.
Medical Inspector, Bureau of Health for the Philippine Islands; Acting Chief, Baguio Hospital.
BAGUIO, BENGUET, MOUNTAIN PROVINCE, PHILIPPINE ISLANDS

I report the following case to call attention to the presence of a comparatively rare disease in an uncivilized race in a remote corner of the globe; and to emphasize the value of careful routine examination over snap diagnoses.

Baguio is situated up in the Benguet mountains of the Island of Luzon. This country is inhabited by the wild mountain tribes who, until the advent of the Americans, seldom saw a white man. Moreover there was little, if any, mingling with the more civilized Christian tribes inhabiting the lowlands. Only during the past five years has the famous Benguet road made this region more accessible and brought representatives of other nationalities into closer contact with the Igorrotes.

Patient.—An Igorrote, aged about 40 (they never know how old they are), presented himself at the hospital clinic complaining of a large mass in his abdomen. Little history could be obtained, but the superintendent stated that the patient had been coming to the hospital off and on for over two years, and that the tumor had gradually increased in size.

Examination.—This revealed a bulging abdomen, the bulging being more marked on the left side, and due apparently to a splenic tumor occupying the greater part of the left side of the abdominal cavity, and extending 4 cm. to the right of median line, in the umbilical region. The tumor was hard and nonsensitive to pressure. The patient showed considerable anemia and emaciation.

Blood Examination: Unfortunately a complete blood count was not made at this time, but a stained smear was examined and the following note recorded: Red blood cells show moderate poikilocytosis, and a few nucleated reds, chiefly megaloblasts. White blood cells are enormously increased in number, and show a preponderance of neutrophilic myelocytes, large numbers of polymorphonuclear leucocytes, many large mononuclears, many mast-cells, and a few eosinophils—clearly the picture of splenomyelogenous leucemia.

After three months the patient had not appeared again at the clinic, so that no further observations have been made.

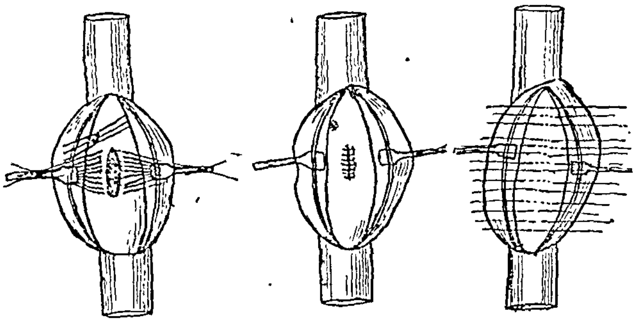
The superintendent states that during the previous two years this patient had been examined by other physicians who had diagnosed the case as malarial splenomegaly and prescribed quinin and ergot. If a blood examination had been made, the diagnosis could undoubtedly have been established long before, but because malaria is such a common tropical disease, it is very easy for physicians to make a snap diagnosis instead of taking the time for a blood examination.

ENDO-ANEURISMORRHAPHY OF POPLITEAL RESTORATIVE TYPE*

A. P. CRAIN, M.D.
SHREVEPORT, LA.

Patient.—J. L., a middle aged colored man, came to my ward in the Shreveport Charity Hospital with a non-pulsating tumor in the popliteal region said to have been caused by traumatism, a hand-car having run over the leg six or eight months previous. The patient also gave syphilitic history with well-defined signs. Although aneurism was suspected, a positive diagnosis was not made, as pulsation was inappreciable, bruit absent on account of blood-clots and x-ray failing to reveal anything of a positive character. The patient was, however, prepared for this operation.

Operation.—After the circulation was cut off, an incision was made over the tumor in the long axis of the limb. On entering the sac a fairly well-organized clot, almost filling the cavity but not completely stopping the circulation, was removed, and a hole the size of a dime was found opening into the main channel of the artery, through which the little finger could be passed and pushed to some little distance. Nature was beginning to show her wonderful curative power and no doubt would have accomplished the result later on. Since the wall of the artery appeared to be in very good condition I decided to try the restorative type, knowing that should I fail I could then do the obliterative and accomplish a cure. After cleansing the wound thoroughly of clots I closed the orifice as well as two collateral openings with interrupted Lembert sutures of chromic catgut No. 2; I also reinforced this with a continuous stitch of the same material. The tourniquet was then taken off and the wound tested for leakage. After a few minutes I noticed a little oozing and I again reinforced this by another fold and row of sutures which succeeded in keeping it absolutely dry.



Endo-aneurismorrhaphy of popliteal restorative type; A, aneurism with collateral opening (a) and opening into main vessel (b); sutures untied; B, openings closed and sutures tied; C, tiers of Lembert sutures placed one above the other closing sac. First row is put in the length of the sac and tied, a fraction of an inch above this row another is placed, and so on, until the sac is closed. The skin is then sutured over this. All sutures used were Lembert's (interrupted reinforced by a row of continuous sutures).

In the closure of sac, I deviated a little from Dr. Matas' original method simply to see whether a little original idea of my own would work or not. Instead of enfolding the sac as Dr. Matas does, I simply used a row of interrupted Lembert sutures on one side near the bottom, taking in the floor of the sac and coming out of the other side at the same point at which I started. This row of Lembert sutures was made in the long axis of the tumor. Now a fraction of an inch above this I made another row of Lembert sutures like the first, and still another, and so on until the sac was closed; I then whip-stitched the edges together with catgut and sutured the skin over this with silkworm gut; no drainage.

Postoperative History.—The leg was put up in an extension splint for ten or twelve days, at the end of which time stitches were removed and, save one small stitch abscess, the patient made a splendid recovery. The dead space of the sac was entirely obliterated and after the patient had been kept under observation for one month he was discharged as cured. I instructed him to report to me should he experience any trouble; and since it has been about six or eight months I take it that he is all right.

I do not consider this method of closure of the sac any better than Dr. Matas' as far as results are concerned, but it is much simpler and easier to do and an experiment that worked well.

CONCLUSIONS

These crude drawings accompanying this article were copied from Bickham's "Operative Surgery;" they are

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* Read before the Surgical Section of the Southern Medical Association, Nov. 9-11, 1909, at New Orleans, La.

Dr. Matas' original drawings. Any type of this operation endo-aneurismorrhaphy offers the following advantages.

1. Union takes place between the serous surfaces lining the sac (the arteries being mesoblastic).

2. The sutures take good and strong hold in the walls of the arteries.

3. The technic is simpler; there is less traumatism in elimination of any ligature and no disturbances of sutures in vicinity of aneurismal sac; collateral circulation is preserved and circulation of main artery preserved in favorable cases; usually there is prompt healing by approximation of skin to floor of sac.

4. According to my experience in this case any method which will obliterate the dead space will do to close the sac, since the success of the operation depends on thoroughly closing the openings and colaterals.

5. Excessive sac walls may be cut away to a certain extent so as to facilitate matters and to keep the wounds from appearing too bulky.

206 Continental Bank Bldg.

Therapeutics

EPISTAXIS

Hemorrhage from the nasal passages, nosebleed, may be of all grades, from the most trivial to the most dangerous. It may consist of only a few drops of blood, and may cease spontaneously, or it may be so abundant and so rapid as to imperil life, or even to result in death.

In most cases, the hemorrhage is caused by some local lesion in the nose, but in some cases it is due to a general disturbance of nutrition, or to disease of some other organ. In a few cases an abnormal general condition and a local lesion may each have a share in producing the hemorrhage.

Epistaxis may occur in the course of the acute infectious diseases, often in the early stage of typhoid fever, in diphtheria, measles and the other exanthemata, malarial diseases, and influenza; in the chronic infections, such as tuberculosis and syphilis, especially when ulcerative processes are localized in the nose. It may also occur in general diseases characterized by deterioration of the blood, such as hemophilia, purpura hemorrhagica, or the hemorrhagic diathesis, anemia, chlorosis, pernicious anemia, leucemia, scurvy, and jaundice; in diseases characterized by high blood-pressure, such as arteriosclerosis, chronic interstitial nephritis, and hypertrophy of the left side of the heart; and in diseases accompanied by venous stasis, because of the difficulty of the return of blood to the right heart as occurrs in cardiac disease with failure of compensation, some forms of nephritis, and hepatic disease, especially cirrhosis. Finally it occurs, though rarely, as a vicarious discharge to take the place of suppressed menstruation.

Among the local conditions the most common is ulceration of the mucous membrane of the nasal passages. These ulcers are often due to chronic nasal catarrh, and are usually situated on the cartilage of the septum at its anterior and inferior part.

Although there may be bleeding from any part of the nostrils, the vast majority, perhaps as much as 90 per cent., of all bleeding comes from the mucous membrane of the anterior part of the septum. Sharp, bony outgrowths from the septum and from the turbinates may cause ulceration and consequent bleeding. Adenoids are probably rarely the cause of epistaxis. Syphilis may cause bone ulceration and bone necrosis and be the cause of an epistaxis. Rhinoliths, or nasal concretions, are a rare cause of nasal hemorrhage.

Traumatism is, of course, a frequent cause of hemorrhage, especially fracture of the nasal bones and consequent laceration of the nasal mucous membrane. There may, of course, be hemorrhage from the nostrils in fracture of the base of the skull. Abrasions of the mucous membrane often occur from picking the nose, or from accidental or intentional introduction of foreign bodies into the nostrils.

Polypoid growths are frequent in the nose and tend to recur, and often cause bleeding, especially when connected with the septum. Various other growths, both benign and malignant, can occur in nostrils and may be the cause of hemorrhage.

The *New York Medical Journal*, August 28 and September 4 and 11, 1909, published a series of papers on the treatment of epistaxis. The composite advice of these writers is contained in the following recommendations.

When called to treat a patient who has nosebleed the first thing to do is to try to stop the bleeding; the details of the history of the case may be elicited later.

One writer (Henry I. Berger, Indianapolis), insists that the physician should not become excited, and that he should gain the confidence of the patient and the friends. Another recommends that the onlookers who are not actually engaged in assisting in the treatment should be induced to leave the room.

If the patient is walking about, frequently blowing his nose and wiping it to see if the bleeding has stopped, he should be made to sit in a chair with his head inclined forward, so as to diminish the tendency of the blood to flow backward into the pharynx, and also to encourage the blood to collect and clot in the posterior part of the nose. By carefully wiping the blood from the anterior openings of the nose, it should next be determined in which nostril the bleeding is taking place, as it does not usually occur in both at the same time.

Having determined in which nostril the blood is escaping, and remembering that the bleeding point is usually on the anterior and inferior part of the septum, remembering also that pressure on the bleeding point is the most efficient way of checking hemorrhage, the physician should press the ala of the bleeding nostril firmly and continuously against the opposed side of the septum. At the same time cold applications may be made to the nose and back of the head and neck.

While the physician is employing this maneuvre, and waiting to see whether it proves effective, he has a chance to consider whether it is really desirable to stop the hemorrhage, or whether it would be better for the patient to allow it to continue.

This point is discussed by Dr. W. A. Wallace, of Spartanburg, S. C., who says: "We base our treatment primarily on the existing blood pressure. When the nosebleed is present with a blood pressure at or below 160 mm. we are at liberty to use measures to stop the hemorrhage. If the blood pressure is above 160 mm. we must use general treatment, for in these cases local treatment is contraindicated."

"In cases of the second class, that is, those cases of epistaxis in which there is blood pressure of 160 mm. or more, we are not permitted to use local treatment, because the nose-bleed is simply Nature's safety valve acting to prevent a cerebral hemorrhage. In these cases our aim should be to assist Nature in relieving the high pulse tension; and in the majority of cases venesection is indicated, especially so when we have indications of an impending cerebral hemorrhage, such as dizziness, headache, and distended temporal veins. In the less severe cases we may use an ice cap to the head, and at the same time the hot mustard foot bath. Morphin, gr. ⅛, subcutaneously, is, as a rule, required to quiet the patient. There are three important points which should always be borne in mind in treating epistaxis accompanying high blood pressure. First, do not attempt to check the hemorrhage with local applications to the nose. Second, always treat the kidneys on account of the existing nephritis. Third, use an eliminative treatment, such as saline cathartics, to remove the nitrogenous retention that is causing the high blood pressure and resulting in epistaxis."

In the absence of a blood-pressure apparatus, the physician must, by such examination as he is able to make, without an exact determination of the blood pressure, and by inquiries in regard to the way in which the different organs are performing their functions, decide whether it is better to check the hemorrhage at once or to allow it to continue for a time.

If it is determined to stop it, and the pressure of the ala nasi against the septum does not affect this result, then the blood and clots should be removed, and the interior of the nose carefully examined by means of a speculum and reflected light from a head mirror, or by direct illumination with electric light, if either are at hand, in order, if possible, to discover the exact site of the hemorrhage.

The bleeding nostril may be cleansed in several different ways. Some prefer pledgets of absorbent cotton wound on small pieces of wood, or on wooden toothpicks, and held in forceps. The cotton may be used dry, or moistened with an antiseptic or astringent solution. Others prefer to cleanse the blood from the nostril by using a syringe with hot saline solution or diluted solution of peroxid of hydrogen.

Having determined the exact situation from which the bleeding takes place, there is opportunity for a choice of any one of many local applicants. If the bleeding surface is of limited area, as for example an ulcer, the actual cautery may be applied, but care must be exercised that it be kept at a cherry red heat. Chromic acid, trichloracetic acid, and nitrate of silver are recommended by some. The local application of Monsel's solution. Liquor ferri subsulphatis, is recommended, and is often efficient, but is probably justly condemned by others. A 5 per cent. solution of nitrate of silver is sometimes useful. The official solution of hydrogen dioxid and solutions of suprarenal preparations are often effective.

If the bleeding area cannot be definitely found, or if the preparations applied do not stop the bleeding, resort must be had to the use of tampons. Here again there is a wide range for choice of individual methods. In many cases tamponing from the front of the nose will prove effective. For this narrow strips of sterile gauze may be used, to which a string is attached to facilitate their removal, or the so-called Bernay's sponge may be employed. This is inserted into the nostril while dry and then moistened so that it swells up and exerts pressure. The strips of gauze may be moistened with sterile saline solution, or suprarenal solution. The nose should be packed full so as to get the effect of pressure. The gauze also encourages clotting of the blood.

Some use styptic cotton, but this is not very satisfactory and has some objectionable features.

Dr. Albert L. Hall, of Fulton, N. Y., has had gratifying results from the use of puff ball in the nasal passages. It often stops the hemorrhage, and can be removed by means of the syringe with very little danger of starting up the hemorrhage. This is something which must always be guarded against when once the hemorrhage has stopped. Too great curiosity to learn the exact condition of affairs within the nose not infrequently results in the recurrence of a hemorrhage which was stopped only with great difficulty.

In the meantime, if the bleeding is severe, the limbs may be constricted close to the body, so as to retain as much blood as possible in them, and so diminish the pressure and the amount of blood in the nasal vessels.

If this tamponing from the front of the nose proves ineffective it is necessary to resort to the application of a tampon in the posterior nares. The traditional way of accomplishing this is with the aid of a Bellocq's sound. If this instrument is not at hand, a soft urethral catheter, to the eye of which a heavy silk ligature if fastened, may be substituted for it. This is passed along the floor of the nose, until it can be seen in the pharynx below the soft palate. It is then grasped with a pair of long forceps, and drawn into the mouth. Securing the ligature, the catheter is withdrawn through the nose leaving the ligature with one end hanging from the nose and the other from the mouth. It is wise to have this ligature double, so that if for any reason one is inadequate, the other can be used. One of these ligatures is tied, a distance of eight or ten inches from its end, to a roll of gauze or absorbent cotton large enough to fill up the posterior entrance to the nasal passage, some say "as large as a walnut"; others, "one and a half by one inch in size." By the aid of the ligature this is drawn back through the mouth and up against the posterior entrance to the nose, the adjustment being aided by the finger of the physician passed through the mouth and back of the soft palate. After this is snugly in place the anterior part of the nose should be packed from the front.

If skilfully done, this will stop the hemorrhage. The next question which arises is how long shall these tampons be allowed to remain in the nose. All agree that they should not be allowed to remain more than three days, and most advise their removal after one day. If they are left in the nose too long, there is danger that infection will be set up in the nose or the accessory sinuses. The removal must be done with great care, for there is danger that the hemorrhage will recur, and it may become so severe as to necessitate another application of the tampons after thorough cleansing of the nasal passages with an antiseptic solution.

If the patient is very nervous and restless, a hypodermic injection of one-eighth of a grain of sulphate of morphin is often of advantage.

When the hemorrhage tends to recur, and there is low blood pressure, when there is cardiac debility, and especially when there is lack of good compensation in valvular disease, digitalis or strychnin, or both, are valuable aids in preventing hemorrhage.

The after-treatment of these patients must never be neglected. Any local cause for the hemorrhage—an ulcer, dilated veins, hypertrophied turbinates, bleeding polyps, etc.—should be carefully treated and removed if possible. Any disturbance of the other organs of the body should be investigated and relieved.

Often the loss of blood, and in some instances predisposing conditions in the blood, furnish a strong indication for administration of iron and other tonics.

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THE GENERAL PRACTITIONER, THE SPECIALIST AND THE PUBLIC

That there is a tendency among the members of the profession studying and practicing different branches of the science and art of medicine to drift apart and to lose sympathy with each other is a matter of frequent observation. The exclusive reliance of the specialist on the journals devoted to his special subject, which the general practitioner does not read, has contributed not a little to this lack of sympathy among the members of the profession. The laboratory man, the experimenter, wrapped up in the problems which he is attempting to solve, fails to keep in touch with the rest of the profession. The surgeon is apt to feel that the practice of medicine is subsidiary to his art. The men practicing the various specialties are each prone to believe that his branch is the pivot about which the practice of medicine revolves. The general practitioner feels little interest in any of them. It is only when some epoch-making discovery or procedure crystallizes the efforts, perhaps, of numerous workers applying themselves over a long period of time that the average practitioner realizes the value of the laboratory investigator's efforts and their application to his work. The surgeon and the men practicing the allied special branches come more in contact with the general practitioner, but often the latter looks on his specializing colleagues as necessary evils—necessary because he must refer to them the cases beyond his skill. Taking the material view of it, he feels that for a very brief service they exact an honorarium for which he would have to labor long and hard. When they attend society meetings he finds that they read long-winded papers on technical subjects in which he has no particular interest or which he does not understand, or they seek to magnify the importance of their particular specialties.

As a matter of fact, the general practitioner and the specialist need each other, and the best interests of medicine are served when they all meet and freely exchange views on their daily work and discuss subjects of interest to the whole profession. The researchers should show themselves frequently at medical meetings and tell the general profession what they are trying to accomplish and how they are endeavoring to do it. The supposed mystery and the difficulties of their work will be cleared up to the general profession, and in many instances, no doubt, the experience of the general practitioner will give the investigator exactly the clue needed to solve the problems on which he is working.

The men of greater opportunities, whether surgeons, internists or specialists, should go more frequently to the state, district and county societies. They should get off their scientific high horses and talk more about the little things of their work—the things that touch the general practitioner in his daily practice—and not always about the big operations, or the procedures and technic to be employed in the difficult and the rare cases. By works and words the specialists should seek to avoid creating the impression which *sometimes* prevails that when they go to medical meetings it is for the purpose of furthering their personal interests along the line of their specialties. They should all take more interest in medical-political affairs and the common interests of the profession. The claims of the larger affairs of public hygiene and health are becoming daily more insistent and demand the aid of the leaders of thought in the profession, and, indeed, of the whole profession.

This is one of the large and important fields in which the activities of the profession in future are to be exercised. A bill recently introduced in Congress to create a department of public health with a portfolio in the cabinet shows the importance which these matters are assuming in the public mind. There are other important public matters of a medical nature still demanding the attention of the profession, such as medical education and legislation and the protection of the public from medical frauds. All these questions, for their best solution, require a united profession, cooperating in closest harmony along all the lines of scientific, professional and political-medical endeavor.

LIGHT ON SHAKESPEARE'S MEDICAL INFORMATION

One of the most interesting features of Shakespeare's plays is the amount and variety of information with regard to medicine in his time which they contain. Shakespeare evidently knew the names and uses of many drugs. He mentions aconitum, ginger, camomile, the mints, savory, marjoram, the worts, wormwood and many others. He speaks of "potions of eysell" or vinegar given to ward off infection.[1] In "Othello" he mentions two hypnotic drugs;[2] and in "Romeo and Juliet" the use of the sleeping-potion suggests anesthesia.[3]

Of course, one need not accept the conclusion of some bewildered commentators, who rashly infer that Shakespeare must have been a physician, or at least a medical student. It should be remembered that an empirical knowledge of drugs and their uses (which, after all, was the only kind of knowledge on that subject possessed even by physicians of that day) was not *monopolized* by the medical profession down to the seventeenth century and even later. In the practical education of carefully instructed women of high and low degree, cookery and other housewifely arts were scarcely more a matter of course than was the care of the sick; and this latter included prescribing for the commoner diseases. Country ladies were expected to keep well-stocked drug-closets and to be ready to dispense remedies to their families or dependents. The old village wives gathered herbs and simples and concocted medicaments. Formulas were handed down in families. One need only conjecture that Shakespeare as a boy often loitered about while his mother was at her household duties, or sometimes listened to the old women's gossip in or about Stratford, to realize that most of the information in his plays concerning drugs and their uses may easily have been absorbed unconsciously in his early youth.

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[1] Whilst, like a willing patient, I will drink
Potions of eysell, 'gainst my strong infection.
Sonnet 111.

[2] Not poppy nor mandragora
Nor all the drowsy syrups of the world
Shall ever medicine thee to that sweet sleep
Which thou ow'dst yesterday.
Othello, Act III, Sc. 3, l. 330.

[3] Romeo and Juliet, Act IV, Sc. 1.

The hint in regard to the circulation of the blood in Brutus' speech about "the ruddy drops that visit my sad heart"[4] indicates knowledge of another grade, for anatomy and physiology were mysteries to all but a few of the deeply learned. "Julius Caesar" was written before the publication of Harvey's "De Motu Cordis et Sanguinis;" but Shakespeare's words, of course, do not imply knowledge of the true route of the circulation, as explained by Harvey, but only that general conception of the blood as a circulating fluid, in some way propelled by the heart, which was current in pre-Harveian times. Here, again, one is not required to assume that Shakespeare was a specialist in order to account for his possession of an idea which was the common property of scholars and which must have appealed to the constructive imagination of such a mind as his.

The descriptions of mental disease in Shakespeare's plays, moreover, show astonishing force, veracity and discrimination. It would seem that he must have had unusual opportunities for the study of diseased minds. Once more, however, the difference in times and customs must be taken into consideration. The insane in those days were not necessarily shut away from the sight of normal men. Here a violent maniac was "bound and laid in some dark room" by those responsible for him, as Antipholus of Ephesus was confined when suspected of lunacy by his wife; there a harmless lunatic roamed the country like crazed Lear and "poor Tom o' Bedlam;" while elsewhere a hapless creature like distraught Ophelia lived unrestrained amid her ordinary surroundings. It is probable that insane people were no rare sight anywhere in Shakespeare's day; but it appears, according to some documents recently brought to light and published[5] by Professor Wallace of the University of Nebraska, that Shakespeare may have had an exceptional number of cases of insanity brought under his view. These manuscripts, the records of a case in the London Court of Requests in 1612, show that Shakespeare lived for some years with a Huguenot family named Mountjoy at the corner of Silver and Muggle (now Monkwell) Streets. At the north end of Muggle Street was Ambrose Nicholas' almshouse, which probably, like many other almshouses in that day and since, sheltered insane as well as sane paupers.

Another interesting field for conjecture is furnished by the fact that Barber-Surgeons' Hall stood almost opposite to Shakespeare's residence on Muggle Street. It seems not unlikely that he may have come into contact with some of the members of the Guild of Barber-Surgeons, and that some, at least, of his medical knowledge may have been gained from this contact.

Perhaps, after all, we weary ourselves overmuch in seeking to find the specific sources of the amazing variety of knowledge displayed in Shakespeare's plays. Genius does not amass laborious loads of foreign learning, but selects what it needs with the sure instinct which guides the bee to the flower. Shakespeare's medical knowledge, if measured even by contemporary professional attainments, probably would have been found but scanty, like his "small Latin and less Greek." It is the unhesitating sureness with which he used what he did know that makes his work a marvel for all time.

THE SANITARY SIDE OF THE GARBAGE QUESTION

In an American city of five hundred thousand population the refuse amounts to about three hundred thousand tons per year. This includes the garbage proper, or swill, ashes and miscellaneous rubbish.

From a sanitary point of view the proper disposal of a city's waste has a bearing on disease that cannot be waved aside lightly. The garbage, a fermenting and decomposing mass with a sour, noisome odor, is offensive enough to demand prompt and careful removal; and even though it does not directly "breed" disease, it does furnish a breeding-place for flies and food for rats and other disease-transmitting vermin. Boards of health, therefore, are entirely justified in demanding stricter regulations concerning the handling and collection of this material.

The care of the garbage in the household and its collection are even more important for sanitation than is its final disposal. Boards of health should require householders to keep kitchen refuse in tight, well-covered cans. These should be emptied at least daily in summer, and scalded out at frequent intervals. A good way to disinfect a garbage-can and to prevent odors is to burn it out with a fire of old paper. The collecting-cart should be water-tight and carefully covered. In these days of metallic carts it is a disgrace for any city to use the old leaking and reeking wooden vehicles. The employees who gather the materials should be clothed in decent, clean khaki-colored uniforms. The uniforming of such a sanitary corps of "brown-wings" will add a little to the cost, but will pay for itself.

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[4] Julius Caesar, Act. II, Sc. 1.
[5] Wallace, C. W.: Harper's Month. Mag., March, 1910.

Most of our cities have had sad experience in the burning of garbage by the so-called "American method," known as incineration. Of two hundred and twenty-five incinerating furnaces erected in the United States about half have been abandoned because they became intolerable nuisances. The cause of this is the burning of the garbage at a low temperature. In order to correct this imperfection of the low-temperature incinerator, secondary fires have been introduced into some of them, to burn the secondary gaseous products of combustion, but with only partial success. Meanwhile European cities, both British and Continental, have demonstrated that it is possible to burn garbage at a high temperature (above 1,250 F.) under forced draft without the least complaint from those living in the neighborhood of the "destructors." In the English destructor the ashes and garbage are burned together. This has several advantages. It simplifies the collection; the ashes absorb the moisture from the swill, a process of desiccation which retards or restrains fermentation; while on the other hand the moisture from the swill wets the ashes and prevents them from blowing about. Although the ashes have been through the fire, they still contain much unconsumed carbon that will burn under forced draft, and at the very high temperature thus produced. The resulting ash is mostly in the form of a vitreous clinker that makes splendid material for filling, paving or concrete. Many of these destructors are placed in the heart of European cities, thereby shortening the haul and diminishing the cost. The caloric value of mixed garbage and ashes is surprisingly large and the heat may be used for municipal purposes. These destructors are now in successful operation in three American cities and municipalities (New Brighton, Long Island; Seattle, Washington, and Milwaukee, Wisconsin), and two in Canada (Westmount, a suburb of Montreal, and Vancouver, B. C.). The destructor at Milwaukee, which is just finished, is the largest of its kind.

A few cities (Cleveland and Columbus, Ohio), use the method of "reduction," and obtain a profit from the grease and the tankage, the latter being of value as fertilizer. About 5 per cent. of American garbage may readily be extracted in the form of grease.

The remaining refuse consists largely of paper, cardboard, twine, boxes, wood, old shoes, rubbers, rags, tin cans, bottles, all of which have a market value that more than repays sorting them out. Colonel Waring long ago showed that about 90 per cent. of such waste may be reclaimed for commercial uses.

Many of our overgrown cities still use the village method of disposing of ashes and rubbish on dumps. This method is clearly objectionable, and is an evidence of backwardness in municipal sanitation and civic pride. Our American cities would do well to look to this problem of collecting and disposing of their waste in an orderly, unobjectionable and sanitary manner.

PUBLIC SUPPORT OF NATIONAL HEALTH LEGISLATION

In the campaign now being carried on for the establishment of a national department of health, the emphatic endorsement of the general public is of the utmost importance. For twenty-five years past, the medical profession of the United States, both as individuals and as an organization, have been urging the importance and necessity of such legislation. The position of the profession on this question is, therefore, so well known to members of Congress that the influence of physicians is to a certain extent discounted. Members of Congress are perfectly willing to admit the demand for such legislation as far as the medical profession is concerned. What is needed, however, to convince them of the importance of such legislation is a positive expression of opinion from prominent business and professional men outside of the medical profession. It is, therefore, of the utmost importance that physicians interested in the passage of adequate public health legislation by Congress should use all proper means to secure expressions of opinion from prominent business men, lawyers, judges, educators and others of influence. If the members of Congress can be shown that a strong popular demand for such legislation exists and that it is based on a thorough understanding of the necessity of federal regulation of public health, there will be no question as to the adoption of such legislation.

Medical News

CONNECTICUT

State Society to Hold Meeting.—The annual meeting of the Connecticut State Medical Society will be held at New Haven, May 25 and 26. Dr. Samuel D. Gilbert is president and Dr. Walter R. Steiner, Hartford, is secretary.

Society Meetings.—The one hundred and seventeenth annual meeting of the Windham County Medical Association was held Thursday, April 21, at the Hotel Hooker, Willimantic. The meeting was called to order and the annual address made by the president, Dr. John Weldon, of Willimantic. Two new members were admitted to membership. Dr. William L. Higgins, of South Coventry, and a member of the Connecticut State Legislature, spoke on recent medical legislation. The following officers were elected for the ensuing year: President, Dr. George M. Burroughs, Danielson; vice-president, Dr. James L. Gardner, Central Village; secretary-treasurer, Dr. J. Hobart Egbert, Willimantic; state delegates, one year, Dr. Robert C. White, Willimantic; two years, Dr. Seldom B. Overlock, Pomfret; councilor, Dr. John B. Kent, Putnam; and censors—three years, Dr. Robert C. Paine, Thompson; two years, Dr. Owen O'Neill, Willimantic; one year, Dr. Clarence E. Simonds, Willimantic.——At the one hundred and eighteenth annual meeting of the Fairfield County Medical Association, held in Bridgeport, April 12, the following officers were elected: President, Dr. Herbert E. Smyth, Bridgeport; vice-president, Dr. William L. Griswold, Greenwich; secretary, Dr. Frank W. Stevens, Bridgeport; treasurer, Dr. James D. Gold, Bridgeport; councilor, Dr. Samuel M. Garlick, Bridgeport; and censors, Drs. Edward M. Smith, Bridgeport; David C. Brown, Danbury, and Samuel Pierson, Stamford.——At the one hundred and eighteenth annual meeting of the Middlesex County Medical Association, held in Middletown, April 14, the following officers were elected: President, Dr. Matthew W. Plumstead, East Haddam; vice-president, Dr. Daniel A. Nolan, Middletown; clerk, Dr. Arthur B. Coleburn, Middletown; censors, Drs. John E. Bailey and James H. Kingman, Middletown, and Miner C. Hazen, Haddam; and delegates to the state society, Drs. Charles B. Young, Middletown, and George N. Lawson, Middle Haddam.

ILLINOIS

Meeting of State Society.—The Illinois State Medical Society will meet at Danville, April 17-19. Dr. George W. Crile, Cleveland, Ohio, will deliver the address on surgery.

Board of Health Created.—The city of East Moline has created a board of health, and Dr. Henry J. Love was made health commissioner. The other members of the board are Mayor Johnson and the city marshal.

Epidemics.—An epidemic of fourth disease has made its appearance at Princeton, thirty cases having occurred.—— Twenty cases of pneumonia have occurred at the Illinois Southern Hospital for the Insane, located at Anna. The epidemic is now under control.

Medical Library.—At the last meeting of the Rock Island County Medical Society, through the efforts of Drs. Louis Ostrom and William H. Luedwig, Rock Island, a medical library was established, to be located in the Denkmann Memorial Building at Augustana College.

Medical Society Meeting.—At the meeting of Hamilton County Medical Society at McLeansboro, April 13, Dr. Paris M. Nation, McLeansboro, county coroner, was elected president; Drs. William W. Hall and Harry W. Dale, McLeansboro, vice-presidents; Dr. Charles M. Lyon, McLeansboro, secretary-treasurer; Dr. Harry W. Dale, McLeansboro, delegate to the state society, and Dr. Marion C. Dale, McLeansboro, alternate.

Personal.—Dr. John W. Dobson, Bloomington, has been elected county physician of McLean county.——Dr. George W. Burch has been appointed examining surgeon for the marine corps at Quincy.——Dr. Frank H. Jenks, acting superintendent of the Elgin State Hospital, has resigned and will assume charge of the Rockford Sanitarium operated by the late Dr. Penn Ransom, who was killed in an automobile accident.—— Dr. Edwin A. Weimer, Peoria, was fined in the police court for failure to report a case of smallpox.

Chicago

Detention Home Quarantined.—The dependent children and delinquent girls' section of the Juvenile Detention Home is under quarantine on account of measles and diphtheria. The cases are mild and there is no danger of the disease spreading.

Save the City Water Supply.—An important measure for safeguarding health in Chicago was advanced in Congress April 19, when the Mann bill, prohibiting the dumping of refuse in Lake Michigan within eight miles of the shore, was ordered favorably reported in the House by the Interstate Commerce Committee. This is one of the measures strongly urged by Health Commissioner Evans.

Henrotin Statue Unveiled.—A bronze statue of Ferdinand Henrotin, founder of the hospital which bears his name, was unveiled April 19, at the Henrotin Memorial Hospital, La Salle avenue and Oak street. The statue was the gift of the Chicago Polyclinic and was wrought by Mrs. Philo R. King. Dr. John W. Chew, head of the staff, presided at the unveiling, and Dr. William T. Belfield, a former associate of Dr. Henrotin, delivered the address.

Personal.—Dr. Niles T. Quales, of the Chicago Norwegian Colony, has been decorated by King Haakon VII of Norway, with the Order of St. Olaf, in recognition of the extensive charitable work carried on by Dr. Quales among his countrymen.——Dr. John A. Stevenson, charged with pandering, was freed of the charge in municipal court, April 20.——Dr. Archibald Church has resigned as consulting neurologist to the Washington Park Hospital.——Dr. Joseph Zeisler has been elected a corresponding member of the Societa Italiana di Dermatologia e Sifilografia.

Plan for Contagious Disease Hospital.—Three hundred members of the Chicago Day Association, including society women and men of wealth, met at the First National Bank Building, April 22, and made preparations to collect a large fund for the building of a hospital for contagious diseases. Dr. William A. Evans, health commissioner, addressed the meeting on the necessity for this hospital, calling attention to the fact that at present the city's sick poor had no place to go except to the county hospital, and there accommodations are insufficient. The proposition that the city and county build a contagious disease hospital was halted by Corporation Counsel Brundage by reason of lack of funds on the part of the city. A committee of the hospital commission, consisting of Drs. William A. Evans and William L. Baum, recommended that the city take care of tuberculosis cases in the early stages and that the county take care of cases in the last stages.

INDIANA

Epidemic of Measles.—Terre Haute is reported as having a severe epidemic of measles.

Health Officers to Confer.—Dr. John N. Hurty, Indianapolis, secretary of the State Board of Health, has issued formal notice to all health officers of the state, announcing the annual conference to be held in Indianapolis, May 10.

Undertakers Must Fumigate Houses.—Dr. Joseph P. Seale, health officer of Fairmount, has notified the undertakers of the city that in the future when they take charge of a body where death is due to tuberculosis, the house must be correctly fumigated following the funeral in accordance with the state law.

Personal.—Dr. Frank F. Hutchins, Indianapolis, and Burton D. Myers, Bloomington, have gone to Europe for the study of nervous diseases.——Dr. O. P. Mercer, Reelsville, has been appointed surgeon for the Vandalia Railroad with headquarters at Indianapolis.——It is reported that Dr. S. Kenosha Sessions, physician at the Southern Indiana Hospital for the Insane, has been dismissed for failure to report the birth of a child to an unmarried attendant at the hospital. Dr. Munson, formerly located in India in the service of the British government, has succeeded Dr. Sessions.——Dr. Charles L. Thomas, Logansport, has sued an automobile company for $50,000 damages for injuries received while riding in a car being demonstrated by the defendant company.——Dr. William D. Schwartz, Portland, has been appointed secretary of the board of health.——Dr. Frank P. Norbury, Kankakee, Ill., president of the Mississippi Valley Medical Association, addressed the Allen County Medical Society on "Medical Quackery," April 19.

IOWA

Distributing Stations for Antitoxin.—The Iowa State Board *of Health has made arrangements to establish stations for the* distribution of diphtheria antitoxin at cost.

Oppose Lengthening School Year.—The Iowa State Board of Health has gone on record as opposing the plan to lengthen the school year. The board asserts that the health of the child is paramount and that the increased school year will be detrimental.

Personal.—Dr. Jasper E. Guernsey, Olin, has been appointed local surgeon for the Chicago, Milwaukee and St. Paul Railroad.——Dr. Albert H. Peterson has been reappointed health physician of Ottumwa.——Dr. George W. May has been appointed health physician of Cascade.

State Society Meeting.—The Iowa State Medical Society will meet at Des Moines May 18 and 19. Dr. John B. Murphy, Chicago, will be the guest of the society. The influence of public school life on the physical development of the child will be one of the principal topics for discussion.

Society Meeting.—The thirty-seventh semi-annual meeting of the Washington County Medical Association was held at Washington, April 13. Dr. Joseph H. Hull, Washington, was elected president; Dr. William H. McLaughlin, Riverside, secretary-treasurer, and Drs. Edmund R. Jenkins, Washington; George W. Hay, Washington, and George W. Dosh, Brighton, censors.

KANSAS

Antituberculosis Society at Topeka.—The Topeka Antituberculosis Society, with A. A. Godard as president, was organized April 13. A constitution and by-laws were adopted, and addresses were made by D. M. Fisk, of Washburn College and Mr. Deacon, of the State Board of Health.

Society Meetings.—The Golden Belt Medical Society held its semi-annual meeting in Salina, April 8. The following officers were elected: Dr. Oliver D. Walker, Salina, president; Drs. W. D. Whitmer, Abilene, and James D. Colt, Manhattan, vice-presidents; Dr. Louis O. Nordstrom, Assaria, secretary, and Dr. Winfield S. Harvey, Salina, treasurer (re-elected).

Public Health Meeting.—At a public health meeting at Wellington, under the auspices of the Sumner County Medical Society, Dr. Samuel J. Crumbine, Topeka, secretary of the Kansas State Board of Health, delivered an address on the subject "Water and Soil Pollution." Other public questions were discussed by members of the society, Ex-Judge W. T. McBride and Senator George Hunter. A resolution was passed that congressmen from Kansas be requested to support the bill establishing a national bureau of public health.

MAINE

Gift to Maine State Sanatorium.—Mr. E. D. Chamberlin, of Massachusetts, has given $15,000 to pay the debts of the Maine State Sanatorium Association, and in addition, has placed the sum of $200,000 in the hands of three trustees, the income of which is to be used for the running expenses.

Transfer of Tuberculous Insane.—Ten men and eleven women tuberculous insane patients have been transferred from the Maine Insane Hospital at Augusta, to the Eastern Maine Insane Hospital, Bangor, under the direction of Drs. Sturgis and Carl J. Hedin, Augusta. A new building has been provided at Bangor for the tuberculous patients.

Personal.—Dr. Ralph A. Parker, Auburn City, and Dr. Herbert S. Sleeper, Lewiston, members of the medical staff of the Central Maine General Hospital, Lewiston, have been appointed on the staff of the Auburn Antituberculosis Association.——Dr. Thomas F. Conneen, Portland, has gone to New York, and will go thence to Germany for study.——Dr. Harry W. Mitchell, superintendent of the Eastern Maine Insane Hospital, Bangor, has resigned, to take effect June 15. He has been appointed superintendent of the Danvers Insane Hospital, Danvers, Mass.

MARYLAND

New Cottages to Be Erected.—Steps will be taken at once to erect four new cottages, each to accommodate 75 patients, at Springfield Asylum for the Insane, Sykesville.

Officers Chosen.—At the annual meeting of the Section on Medicine and Surgery of the Medical and Chirurgical Faculty of Maryland, Dr. Joseph C. Bloodgood was chosen chairman; Dr. Alexius W. McGlannan, secretary-treasurer, and Dr. George A. Fleming, a third member of the committee, all of Baltimore.

Symposium on Hookworm.—A feature of the annual meeting of the Medical and Chirurgical Faculty, April 27, was a symposium on hookworm disease. The speakers were Prof. William H. Welch, Dr. Charles W. Stiles, and the secretaries of the state boards of health of Maryland and North Carolina.

Medical Missionaries Safe.—News has been received that Dr. and Mrs. Edward H. Hume, missionaries, who were compelled to flee from Changsha to Hankow, China, when the Chinese burned the buildings of the Yale University Mission a few days ago, are safe. Dr. Hume is a medical graduate of Johns Hopkins, and his first missionary work was in India. After a year and a half there he went to Changsha to found a mission.

Reunion of Alumni.—Cards have been sent out for a reunion of the alumni of the Johns Hopkins Medical School, on May 6 and 7. There are about 600 graduates and this will be their first meeting since 1893, when the school was opened. The object is to effect a permanent organization. There will be scientific and medical discussions. The committees are in charge of Drs. Thomas R. Brown and J. H. Mason Knox, Baltimore, and Joseph H. Pratt, Boston.

Hospital Report.—According to the thirty-second annual report of the Presbyterian Eye, Ear and Throat Charity Hospital, 842 patients were treated in the hospital and 10,539 cards were distributed to dispensary patients, during the past year. The number of visits to the hospital was 35,248; the daily average of patients in the dispensary was 110. Since the establishment of the hospital, 32 years ago, there have been 278.711 patients and 1,000,853 visits.

New Buildings for Johns Hopkins.—Announcement is made by the Johns Hopkins trustees that they are ready to start active work towards erecting the new buildings at Homewood, the new site in the northern suburbs. The architects have been selected to draw plans. The buildings will cost $1,700,000 and will be the most extensive ever proposed for an institution in Baltimore. The initial plan calls for a group of six, two to cost $250,000 each and four to cost $150,000 each.

Personal.—A verdict of $1,000 was awarded against Dr. James L. Truax, Baltimore, for alleged maltreatment of a broken arm.——Dr. Solomon C. Katzoff, Baltimore, was painfully bruised by being thrown from his carriage in a runaway accident, April 19.——Dr. Isaac T. Coston has been elected mayor of Pocomoke City for the third consecutive term.——Dr. Thomas McCrea, associate professor of medicine in Johns Hopkins Medical School, was operated on for appendicitis at Johns Hopkins Hospital, April 21.

Health Officers Appointed.—The county commissioners of Baltimore County have appointed the following: County health officer, Dr. James F. H. Gorsuch, Fork; district health officers, Drs. Arthur H. Mann and Henry F. Shipley; Henry A. Naylor, Pikesville; Harry M. Slade, Reisterstown; D. M. Resh, Beckleyville; Joseph S. Baldwin, Freeland; Eugene W. Heyde, Parkton; Benjamin R. Benson, Cockeysville; Richard C. Massenburg, Towson; J. T. Payne, Phœnix; James F. H. Gorsuch, Fork; William E. McClanahan, Baltimore; Frank H. Ruhl, Landsdowne; William F. Clayton, Baltimore, and John W. Harrison, Middleriver.

For Widows and Orphans.—The Ladies' Auxiliary of the Widows' and Orphans' Fund turned over to the Medical and Chirurgical Faculty, at its annual meeting, April 26, $1,047.91, as the results of the year's work. The fund is a permanent one and the interest alone is used for the relief of widows and orphans of deceased physicians. Mrs. Joseph H. Branham is president. The fund is independent of the Board of Managers of the Home for Widows and Orphans, a charity founded by the State Medical Society. At the annual meeting, April 22, receipts of $110 were reported. Mrs. Eugene F. Cordell was elected president. It is the plan to locate the home ultimately in the suburbs of Baltimore.

Society Meetings.—The Montgomery County Medical Society elected the following officers April 19: President, Dr. William L. Lewis, Kensington; vice-president, Dr. J. Dudley Morgan, Chevy Chase; secretary-treasurer, John L. Lewis, Bethesda; censors, Drs. Claiborne H. Mannar and Frederick N. Henderson, Rockville; delegate to the State society, Dr. James E. Deets, Clarksburg, and alternate, Dr. Otis M. Linthicum, Rockville. Addresses were made by the retiring president, Dr. Otis M. Linthicum, and Dr. G. Milton Linthicum, president of the Medical and Chirurgical Faculty of Maryland.——At the meeting of the Baltimore County Medical Society, held at Mount Washington, April 22, Dr. William H. Welch, president of the American Medical Association, spoke on the good work accomplished by The Journal in the war against injurious nostrums. Of 1,000 proprietary medicines examined 400 were found to be frauds and most of the remaining 600 have been changed, and thus made acceptable. He also spoke of the work done by the Association for the improvement of medical education. "The influence of the American Medical Association," he said, "is most powerful, and I rank it ahead of the state medical boards. Improvements in this line are rapid and I predict a great future for this country in higher medical education."

MISSOURI

Will Move to Jefferson City.—After May 1, the office of state bacteriologist will be moved to Jefferson City, where Dr. Newton McVey will conduct the work of the laboratory.

Plan Change in Health Board.—Kansas City is contemplating abolishing the health board and putting the work of that board under a health commissioner with full authority to act.

Society Meeting.—The Saline County Medical Association met at Marshall, April 12, and elected the following officers: Dr. William Harrison, Marshall, president; Drs. John R. Hall, Marshall, and Frank A. Howard, Slater, vice-presidents; Dr. Roy H. Dyer, Marshall, secretary; Dr. Frank A. Howard, delegate to the state convention at Hannibal in May.

Personal.—Dr. Abra C. Pettijohn, Brookfield, has been appointed superintendent of St. Joseph Hospital for the Insane.——Dr. William A. Clark, Jefferson City, has been appointed division surgeon of the Missouri Pacific and Missouri, Kansas and Texas Railway, with headquarters at Jefferson City.——Dr. Samuel A. Poague, Clinton, has been appointed surgeon for the M. K. and T. Railroad, with headquarters at Clinton, in place of Dr. John H. Britts, deceased.——Dr. Eugene Cohn, St. Louis, has been appointed superintendent of the State Hospital for the Insane at Anna, Ill.

NEBRASKA

Hospital Opened.—St. Luke's Hospital, an institution having accommodations for 30 patients, has been opened in North Platte.

Personal.—Dr. John A. Parmenter, Morse Bluff, has been appointed physician at the Hastings Insane Asylum.——Dr. J. Clyde Moore, Jr., Lincoln, has been appointed clinical assistant at the University of Nebraska College of Medicine.

State Conservation Congress.—The State Conservation Congress, held in Lincoln March 29 and 30, was addressed by Drs. Waite and Wilson, of Lincoln; Mackaye, of Norfolk, and Quigley, of North Platte. The doctors advocated a state lecturer on tuberculosis and venereal diseases, a state sanatorium for tuberculosis and a state-wide system of medical inspection of schools. The congress adopted resolutions favoring these measures.

Society Meetings.—The Nebraska State Health Association, which is an organization of the public health officers of the state, will meet in Lincoln, May 9 and 10. All persons interested in the betterment of public health are invited to be present.——The Harlan County Medical Society met March 9, at Alma, and elected the following officers: Dr. Thomas E. Massey, Huntley, president; Dr. C. Herbert Munger, Republican City, vice-president; Dr. Samuel M. Baker, Alma, secretary-treasurer, and delegates to the state society, Drs. William L. Sucha, Orleans, and Thomas E. Massey, Huntley. A physicians' protective association was formed at the meeting. ——The physicians of Brown, Rock and Keyapaha counties organized a medical society for those counties, at Bassett, April 4. Dr. George O. Remy, Ainsworth, was elected president; Dr. Jonathan J. Evans, Springview, vice-president, and Dr. Charles H. Root, Bassett, secretary-treasurer.——The Knox County Medical Association held its annual session at Creighton, April 6, and elected Dr. Czar C. Johnson, Creighton, president; Dr. Roy Crook, Winnetoon, vice-president; Dr. John B. Bates, Verdigris, secretary-treasurer, and Dr. Willard K. Clark, Niobrara, censor. A uniform system of fees was adopted for all towns of the county. The next meeting will be held in Bloomfield in October.

NEW YORK

Free Bed Fund for Loomis.—At an entertainment given by the Loomis Sanatorium Guild in the Waldorf-Astoria, New York City, the sum of $2,700 was raised for the free bed fund of the Loomis Sanatorium, Liberty.

Sale of Cocain Restricted.—Governor Hughes has signed the bill providing that persons who sell or furnish cocain or eucain as permitted by law on a physician's prescription, shall, at the time of sale give to the purchaser a certificate stating the seller's name and address, the name and address of the physician on whose prescription the drug was furnished, and the date of sale and the amount sold.

A Women's Hospital.—Mrs. O. H. P. Belmont has just opened what is said to be the first hospital managed entirely by women at Hempstead, L. I. Mrs. Belmont gave to the hospital, as a memorial to Mr. Belmont, nearly the entire $50,000 which the building cost. This hospital will not only be managed by a board of women but has a woman superintendent and will have women house physicians.

Personal.—Dr. William L. Russell has been appointed superintendent of the Long Island State Hospital at Brooklyn to succeed Dr. Oliver M. Dewing.——Dr. Stephen Smith, New York City, has been reelected vice-president of the State Board of Charities for the eighth term.——Dr. Francis S. Swain has been appointed health officer of Corning to succeed Dr. Edward W. Bryan.——Dr. David M. Totman, health officer of Syracuse, has been appointed, by the state commissioner of health, medical expert on the diagnosis of contagious diseases, particularly smallpox.

New York City

Bequests.—The will of the late William Hymans of this city leaves $1,000 to Mount Sinai Hospital and $5,000 to Beth Israel Hospital. At the death of Mrs. Hymans, Mt. Sinai will receive $5,000, the Montefiore Home $5,000, and the Lebanon Hospital $1,000.

Medical Society Loses.—Paul Schmidt, who was arrested some time ago on the charge of practicing medicine without a license, brought suit against the New York County Medical Society for $100,000, and a verdict in his favor was rendered to the amount of $7,500.

Hospital Alterations.—Plans have been filed for extensive alterations to the Skin and Cancer Hospital at Second avenue and Nineteenth street. The two adjoining buildings have been purchased. The improvements will include a home for nurses and employees which will cost $3,000.

Personal.—Prof. F. Lange of the University of Munich is here to attend the orthopedic congress in Washington, May 3-6. Speaking before the Section on Orthopedic Surgery at the Academy of Medicine, Professor Lange stated that America stands first among nations in its elaborate methods of caring for crippled children.——Dr. Salvatore Romano, an Italian physician, pleaded guilty to the charge of perjury in connection with the trial of an Italian counterfeiter. He was paroled for sentence.——Dr. and Mrs. W. H. Fox, Dr. Edward W. Pinkham and Dr. and Mrs. John A. Hartwell have sailed for Europe.

Another Dinner for Dr. Jacobi.—Dr. Abraham Jacobi was the guest of honor on the eightieth anniversary of his birth at a dinner at the Hotel Astor April 24, given by the trustees, the Alumni Association, and the physicians of the German Hospital and Dispensary. Dr. Jacobi was presented with an engrossed set of resolutions. In the afternoon of the same day three hundred persons gathered at Mount Sinai Hospital in celebration of the fiftieth anniversary of his connection with that hospital. It was announced that the endowment fund had been collected on the income of which they expected to establish a library in the hospital to be called the Abraham Jacobi Library. The bronze bust of Dr. Jacobi on exhibition in the main foyer had been presented to the doctor by the medical and surgical staff as a token of esteem.

OREGON

Hospital Additions.—An annex to St. Vincent's Hospital, Portland, costing $200,000, is completed and ready for occupancy.——Mr. Horace C. Henry, a wealthy contractor of Portland, has given $100,000 and forty acres of land for the establishment of a cottage sanatorium for the treatment of tuberculosis.

Personal.—Drs. J. H. and Charles Brewer, Salem, have gone to Europe for study.——Dr. Harry F. McKay, Portland, has been appointed a member of the State Board of Medical Examiners, to succeed Dr. William H. Byrd, Salem.——Dr. Robert J. Pilkington has been appointed city physician of Astoria, to succeed Dr. Clara Reames.——Dr. Frank H. Vincil, Roseburg, has been appointed local pension examining surgeon. ——Dr. Harvey J. Clements, Salem, has been appointed medical director of the Oregon State Tuberculosis Sanatorium.

PENNSYLVANIA

State Helps Many Consumptives.—The physicians of the State Tuberculosis Dispensary in Hazleton report having thus far discharged forty-two patients as cured.

Railroad Relief Fund.—The Lehigh Valley Railroad announces that $85,689.30 was paid from the relief fund in the year 1909 for the benefit of the company's employees, leaving a balance of $28,099.91. In thirty-two years the contributions have amounted to $1,485,973.02. Of this the employees have paid half and the company half.

School Inspection.—State Health Commissioner Samuel G. Dixon has completed the medical inspection of rural schools in Dauphin, Cumberland and Lancaster counties. This work will form a basis for the examination of school children in rural districts throughout the entire state. Twelve thousand five hundred and fifty-five children were examined in 572 schools; 2,439 children presented one or more physical defects, tending to handicap them in school work; 1,929 showed defective vision; 249, defective hearing; 284, defective nasal breathing, and 55 presented conditions which indicated tuberculosis.

Philadelphia

Officers Elected.—The officers of the Woman's Hospital Medical Society for the current year are: President, Dr. Sarah H. Lockrey; vice-president, Dr. M. Louise Diez; treasurer, Dr. Annie L. Conner; secretary, Dr. Mary Thomas Miller.

Jefferson Alumni Dinner.—The annual dinner of the Alumni Association of the Jefferson Medical College will be given at the Bellevue-Stratford Hotel, June 4. A special feature of the dinner will be the reunion of the classes graduated from 1880 to 1910.

Testimonial Dinner to Dr. Tyson.—Physicians from all over the eastern part of this country will do honor to Dr. James Tyson, when a large dinner will be given, May 5, at the Bellevue-Stratford. Dr. William Campbell Posey, of 2049 Chestnut street, is treasurer of the committee.

Charitable Bequests.—The estate of Thomas Irwin, valued at $6,700, is left in trust under his will to two sons and at the death of second of these the principal is to go to St. Mary's, Presbyterian and Episcopal Hospitals.——The will of the late Harriet B. Labe devises $300 to the Jewish Hospital Association for a free bed and $200 to the Jewish Foster Home and Orphan Asylum.

Consumption on the Increase.—According to the week's report of Health Department issued April 23, there was a slight decrease in the number of deaths from those reported the week preceding. There was one death from smallpox, the first since the epidemic of 1905. But a feature of the report was the great increase in the number of cases of consumption, from 79 last to 129 this week.

Smallpox Warning Issued.—Owing to the discovery of two cases of smallpox on April 17, an appeal has been made to the public by the bureau of health to cooperate with the department in preventing the spread of the disease. It is urged that a physician be called in on the appearance of any illness of the slightest suspicious character. Dr. Andrew A. Cairns, chief medical inspector, declared that the small-pox on Front street was of the most malignant type he had seen in years. He said that the fact that the disease had existed in the city for over three weeks unknown to the health authorities proved that grounds exist for the request.

Personal.—Dr. James T. Rugh has been appointed consulting orthopedic surgeon at the Charity Hospital, Norristown.——Dr. Fritz Lange, professor of orthopedic surgery at the University of Munich, director of the University Orthopedic Polyclinics and superior surgeon to the Royal Hospital for Cripples of Bavaria, visited this city Monday and Tuesday, April 25 and 26. A clinical lecture on flatfoot was given by him at the Jefferson Hospital, Monday morning, and one on the same subject the following day at the orthopedic clinic of the University Hospital. Tuesday, from 2 to 4 p. m. he spent at the Orthopedic Hospital and later that afternoon inspected the Widener Home for Crippled Children.——Dr. James A. Irwin sailed for Europe April 23.——Dr. John M. Swan will become resident medical director of the Glen Springs at Watkins, N. Y., May 1.——Dr. J. Chalmers DaCosta has resigned from the staff of the Philadelphia General Hospital and Dr. Hubley R. Owen has been appointed in his place.——Dr. Leo S. Rowe of the Wharton School, and Dr. Charles H. Frazier of the Medical School of the University of Pennsylvania were named to represent the university at the forthcoming celebration of the one hundredth anniversary of the independence of the Argentine Republic during the summer.

TENNESSEE

Personal.—Drs. John Allen Gentry, John B. Steele, and M. A. Meacham have been appointed interns at the Erlanger Hospital, Chattanooga.

Conference of Health Officers.—The first conference of State, City and County Health Officers was held in Nashville, April 6 and 7. Seventy-four of the ninety-six counties of the state and twenty-five cities and towns were represented at the conference. The members were welcomed by Governor Patterson. Among the subjects discussed were pellagra, hookworm and tuberculosis, and resolutions on these subjects were passed. A resolution was also passed and a committee appointed looking toward the securing of legislation to define the duties of health officers and to regulate their pay. Dr. Charles W. Stiles, of the Rockefeller Institute, gave an illustrated lecture on the hookworm. A permanent organization was effected and the following officers elected: Kirby S. Howlett, Franklin, president; Dr. George W. Booker, Knoxville, vice-president, and Dr. Blackburn G. Tucker, Nashville, secretary-treasurer.

UTAH

Goiter in Utah.—The appearance of an epidemic of goiter in San Pete, Iron, Sevier and Cache counties during the past year has led the State Board of Health under Dr. Theodore B. Beatty to investigate the cause. Dr. John Sundwall, professor of anatomy at the University of Utah, has conducted the investigation. He found that in the small town of Monroe, 80 per cent. of the female population and 5 per cent. of the males were afflicted. In certain districts further south, it is found that more than half the women were affected. Dr. Beatty states that chemical tests show no constituents in the water not found in other regions where goiter is not prevalent. Geologic conditions will also be investigated.

VIRGINIA

Loving Cup Presented.—At a meeting of the Lynchburg Medical Society, held April 4, a loving cup was presented to Dr. Rawley W. Martin.

Resolutions in Memory of Dr. Kinney.—At a special meeting of the Roanoke Academy of Medicine, resolutions of affection and respect for the late Dr. Jefferson Kinney, a charter member of the academy, were adopted.

New Building for State Sanatorium.—The State Board of Health has let the contract for six new buildings at the State Tuberculosis Sanatorium at Catawba. When completed, this will give the sanatorium a capacity of 112 patients.

Gifts to University Medical College.—Dr. Stuart McGuire, Richmond, has given $10,000 toward a fund to rebuild the University College of Medicine, recently destroyed by fire. The fund will soon be completed and building will begin.

Personal.—Dr. E. P. Amiss, Harrisonburg, returned home April 6, after undergoing a successful abdominal section at Union Protestant Infirmary, Baltimore, five weeks before.——Dr. Davis, second assistant physician at the Eastern State Hospital, Williamsburg, has been promoted to first assistant to succeed Dr. Rea Parker, resigned.——The board of the State Epileptic Colony has elected Dr. Albert S. Priddy, Keyesville, former superintendent of the Southwestern State Hospital at Marion, superintendent of the colony. He takes charge at once.

Society Meeting.—At a meeting of the Northampton County Medical Society, held in Cape Charles recently, the following officers were elected: President, Dr. Edmund W. P. Downing, Franktown; vice-president, Dr. Bertram H. Gilmer, Townsend; secretary, Dr. Carlisle L. Nottingham, Cape Charles, and treasurer, Dr. William L. Dalby, Bridgetown.

Richmond College Merger Abandoned.—Because of failure to effect an agreement the University College of Medicine and the Medical College of Virginia will not be merged as has been announced, but will continue their separate existence. It is reported that the former will erect a new building on the site of that which was destroyed by fire last January.

Hookworm Found in School Children.—At the request of Dr. A. C. Fisher, Emmerton, Dr. C. W. Stiles and Charles G. Crane, of the United States Health and Marine-Hospital Service, examined 39 white school children from a school in the Washington District, Richmond county, to determine the frequency of hookworm infection. Of these 23 were boys and 16 girls. It was found that 37, or 94.8 per cent., harbored hookworms, as demonstrated microscopically. Seventeen pupils, or 43.5 per cent., lived in homes not provided with any privy. The remaining 22 live on farms with a surface privy open in the back. Nineteen reported having had ground itch, 12 deny ground itch, and 8 report that they do not know. The 37 infected spent their entire lives on the farms.

WISCONSIN

Janesville Without Health Officer.—The city council of Janesville voted recently to reduce the pay of city physician to $50 a year. The physicians all refused to accept the office at that figure and demand that it should be raised to $300.

Personal.—Dr. Orlando P. Sala, Bloomington, is seriously ill, as the result of cerebral hemorrhage.——Dr. Louis M. Warfield, Wauwatosa, formerly of St. Louis, has been made assistant superintendent and pathologist to the Milwaukee county hospital.

Epidemics in State Institutions.—The Insane Asylum at Mendota and the Northern Hospital, Oshkosh, are reported to have small epidemics of typhoid fever.——The State Home for Dependent Children, Sparta, is under quarantine for scarlet fever, there being 24 cases in the institution.

Physicians Sentenced.—Dr. Charles W. Beemer, Kenosha, who was arrested more than a year ago on a charge in connection with the death of a young woman, pleaded guilty and was fined $500 and costs.——Dr. William Jennings, Stevens Point, pleaded guilty to having committed arson, and was sentenced to three years in the penitentiary at Waupun.

Society Meetings.—The Iowa County Medical Society met at Dodgeville, April 7, and elected the following officers: Dr. Walter S. Lincoln, Dodgeville, president; Dr. John P. Parmley, Mineral Point, vice-president; Dr. William M. Gratiot, Mineral Point, secretary-treasurer, and Dr. Homer D. Ludden, Mineral Point, Dr. F. L. Crikelair, Hollandale, and Dr. Dennett B. Hamilton, Ridgeway, censors.

GENERAL NEWS AND COMMENT

Awarded a Gold Medal.—The Royal College of Surgeons of England has awarded a gold medal to Dr. Robert Fletcher, principal assistant librarian of the Library of the Surgeon General's Office, Washington, D. C., in recognition of his distinguished services in connection with the *indexing* of the catalogue of that library.

Typhus Investigator Ill with the Disease.—Dr. H. T. Ricketts, of the University of Chicago, who has been in Mexico for several weeks conducting research into the etiology of typhus fever, is ill with that disease; the latest reports of his condition are favorable, however. Of the success of Ricketts' researches our readers are aware through his papers on this subject published in The Journal recently.

Tuberculosis Sunday.—The National Association for the Study and Prevention of Tuberculosis is the agency which drafted into the crusade the ministers, priests, rectors and rabbis of the country. It furnished them with information, which was presented in thousands of the churches of the United States, April 24, showing the ignorance that fosters the great white plague, that claims 200,000 victims every year in this country. An immense number of leaflets were distributed. Medical men, especially sanitarians, occupied the pulpits in many cases.

Monument to Dr. Crawford W. Long.—At Jefferson, Ga., April 21, a monument to Dr. Crawford W. Long was unveiled in the presence of a distinguished gathering of members of the Medical Association of Georgia, which was in session this week at Athens. The monument is in commemoration of the fact that Dr. Long was one of the first to use ether as a general anesthetic. James M. Venable, the patient on whom Dr. Long first operated under ether, is still living. Miss Emma Long, a daughter of Dr. Long, drew the cord which unveiled the monument. Dr. Woods Hutchinson of New York was the principal speaker.

Coming Meetings.—The Congress of American Physicians and Surgeons, with its component societies, the American Association of Genito-Urinary Surgeons, American Association of Pathologists and Bacteriologists, American Climatological Association, American Dermatological Association, American Gynecological Society, American Laryngological Association, American Medico-Psychological Association, American Neurological Association, American Ophthalmological Society, American Orthopedic Association, American Otological Society, American Pediatric Society, Association of American Physicians, and American Surgical Association, will meet in Washington, D. C., May 3-5.

Death of Dr. Carpenter.—The *British Journal of Children's Diseases* announces the death of its editor and founder, George Carpenter, M.D., London, 1890; M.R.C.S., England, and L.S.A., 1885; M.R.C.P., London, 1889; a member of many scientific societies and a prolific writer; at one time editor of *Pediatrics*, an Anglo-American journal devoted to diseases of children; who died suddenly at his home in London, March 27. His death is a notable loss to all those who study diseases of children, not only in Great Britain, but throughout the entire world.

LONDON LETTER

LONDON, April 16, 1910.

(From Our Regular Correspondent)

The New President of the College of Physicians

Sir Thomas Barlow, physician-in-ordinary to the king, has been elected president of the Royal College of Physicians in succession to Sir Douglas Powell. This office is the most important that can be held by a physician in Great Britain and is an ancient one dating from the year 1518. The appointment is only for one year, but as it has from the earliest period been customary to reelect the existing president for a number of years the total number of presidents to date is only 99. The ceremony of election is a quaint one. There are no nominations but each of the fellows present writes the name of the person he prefers on a slip of paper and places it in an urn provided for the purpose. Should a name be placed in the urn by two-thirds of those present its bearer is elected forthwith. In the contrary case a ballot is held in respect of the two whose names figure most often and a majority in favor of one decides the election. Among the most famous presidents are Linacre, Caius, founder of the college of that name at Cambridge, Glisson and Sir Thomas Watson. The greater number of the presidents have passed into oblivion and the fact that so few have achieved enduring fame can be explained by the fact that the election has been determined less by brilliancy of attainments than by level-headedness and unimpeachability of character in all respects, social and scientific. Even election to the fellowship is a more searching test than admission to the most exclusive club, and election to the presidential chair entails a still more rigorous scrutiny. Indeed men of world-wide eminence who seemed in every way marked out for the office have failed to obtain it because of some act, which though it could not be called an offense, was deemed by some of the fellows not in keeping with the best traditions of the college. Thus one distinguished man was not elected owing to the suspicion that he had not been so careful as he should have been as to the way his name had been used in connection with a business company. The present holder of the office is one of the most distinguished physicians of the day and he has made many valuable contributions to medical science. He is best known for his discovery of infantile scurvy (Barlow's disease). The office of President of the College of Surgeons approaches in social importance that of President of the College of Physicians, but it does not quite equal it, partly because it is seldom held for a term of years and partly because a physician ranks somewhat higher than a surgeon as his calling is associated with a university education and greater scholarship, while a surgeon is essentially a craftsman descended from the old barber-surgeons. However, the modern transformation of surgery from an art into a science has rendered this distinction rather shadowy.

Deaths Under Anesthesia

In a previous letter to THE JOURNAL an account was given of the report of a committee appointed by the government to inquire into coroners' inquests. This committee has now issued a further report on deaths under anesthesia. Leading anesthetists, such as Dr. Hewitt, Dr. Buxton and Dr. Silk; eminent surgeons, such as Sir Victor Horsley, Mr. Pepper and Mr. Clinton Dent; physiologists, such as Sir Lauder Brunton and Dr. Waller; and leading dentists were examined. The perils of anesthesia have attracted attention because of the great increase in the number of deaths under it in recent years. In 1866 the number of deaths registered as occurring in this manner was 5; in 1905 it was 155; in 1908, 235. But no absolute deductions can be drawn from these figures. As the law now stands, it is not compulsory to report a death under anesthesia administered for a surgical purpose; all that is necessary is to assign some cause for death. A distinction has to be drawn between death from an anesthetic and death under an anesthetic. Under anesthesia a person may die from the action of the anesthetic, from surgical shock, or from hemorrhage, or from a combination of these or other causes, such as asphyxia from the tongue slipping back, or regurgitation of food. Without investigation, it is impossible to say how far the anesthetic is the cause of death. The number of operations has increased much in recent years, and no statistics exist to show their relation to the number of deaths under anesthesia. Still, when all sources of error are allowed for, there appears to be an increasing number of deaths under anesthetics, and some of them are due to preventable causes. The committee thinks that every death under anesthesia should be reported to the coroner, who should exercise his discretion as to whether an inquest is necessary or not. As the law now stands, the administration of anesthetics is under no regulation. Apart from criminal intent, a bonesetter, a "beauty doctor," or a quack of any kind is as much at liberty to administer an anesthetic as a physician. Their only disadvantage is that if an accident occurs, the fact that they are not qualified is material evidence on the question of negligence. The committee thinks that this is a serious menace to the public, and that the administration of anesthetics should be regulated by law. It is urged that it should be made a criminal offense for any unqualified person, who is not acting under the personal supervision of a qualified physician, to administer a general anesthetic. But the committee does not think that registered dentists should be deprived of the right, which they have always had, to administer nitrous oxid. All dentists have to undergo a preliminary medical examination, and if training in the administration of nitrous oxid is made compulsory the public would be sufficiently protected. As many of the accidents which have occurred in connection with the administration of this anesthetic have occurred when the same person both administered the gas and operated; no person should attempt to do both.

With regard to methods employed in administering anesthetics there was curious difference of opinion among the expert witnesses. Some were of opinion that the way of safety lay in keeping the anesthesia light and that the anesthetic should be pushed only to the point of abolishing pain; others thought that the anesthesia should be profound, otherwise the danger of surgical shock was increased. The conclusion is drawn that the administration is not an exact science, and that the surgeon is between the Scylla of shock and the Charybdis of paralysis of the vital centers. With regard to the choice of an anesthetic, there is no consensus of opinion. Chloroform is largely used in England and still more largely in Scotland. Of the greater safety of ether there was much evidence; one witness declared it to be seven times as safe as chloroform. But it was regarded as unsuitable for the very young and the very old, and in cases of bronchial trouble. Instruction, both practical and theoretical, in the administration of anesthetics, the committee thinks, should be an obligatory part of the medical curriculum.

The Antituberculosis Campaign

Though the antituberculosis campaign has been carried on in Great Britain with great activity in many directions, little has been done in the way of establishing dispensaries for tuberculosis, which are so common on the continent of Europe.

Yet the first dispensary appears to have been founded in Edinburgh, in 1887, by Dr. R. W. Philip. It began in a humble way, as a nucleus of the antituberculosis organization in that city from which there has now developed an elaborate organization consisting of (1) the dispensary; (2) a sanatorium of 100 beds; (3) 60 beds for advanced patients set apart in the fever hospital; (4) a working colony for cured patients; and (5) compulsory notification of the disease. The program of the dispensary includes not only the ordinary treatment of tuberculosis patients, but the visitation of patients at their homes by a physician and specially trained nurse for the purpose of treatment and of investigation into the state of the dwelling and the general conditions of life. and also into the risk of infection of others. Not until last year, when the Paddington Dispensary for Tuberculosis was founded in London, was any attempt made to follow the example of Edinburgh. In London, the annual number of deaths from tuberculosis is over 6,000, and it is estimated that there are 60,000 patients suffering from the disease of whom 24,000 are incurable and 36,000 curable. Of those curable, Dr. Williamson, medical officer of the Paddington Dispensary, estimates that in only 6,000 is the disease sufficiently advanced to show itself by characteristic symptoms and signs. To render the antituberculosis campaign effective, an effort should be made to search out and treat the remaining 30,000. As tuberculosis has been found, with few exceptions, to be a domestic disease, these persons should be found among the relatives of the definitely consumptive. It is the great merit of the Paddington Dispensary that it attempts to supervise the home life of tuberculous patients and search there for "contacts" who may be in an early stage of the disease. A specially trained nurse visits the homes and prepares an elaborate report on the character of the neighborhood and the house, which includes such details as general aspect (clean, damp, dusty, smelly), number of windows (can they open and are they kept open by day and by night?). Does the patient sleep alone in bed or alone in the room? If he has moved within two years, what were his previous addresses? Have there been any illnesses or deaths in the house? What is the health of the other inmates? What precautions are taken to disinfect? Are there tubercle bacilli in the dust of the room? There is no doubt that this home supervision constitutes a great advance in the campaign against tuberculosis. Unfortunately, the hospitals have at present no means of adopting it. However, St. Mary's Hospital, which is situated near the Paddington Dispensary, realizing the great value of the method, is sending its consumptive patients to the dispensary for the purpose of obtaining its benefits.

Outbreak of Cerebrospinal Meningitis in London

London is threatened with an outbreak of cerebrospinal meningitis, a disease from which England has long been free, though, as recorded in previous letters, outbreaks occurred in 1907 in Scotland and Ireland. Already four deaths from the disease are reported from widely separate parts of the metropolis.

PARIS LETTER

(From Our Regular Correspondent)

Paris, April 15, 1910.

Educational Medical Trips to Health Resorts

Tours of medical study among the mineral springs and climatic resorts of France have been organized since 1899 to familiarize foreign and French physicians with French health resorts. These extremely numerous and varied resorts have been divided into five groups, according to their geographical situation. Each year in the first two weeks of September, a tour is conducted among the resorts situated in one region. The only persons allowed on these tours are physicians and their wives, and French and foreign medical students. The time is so arranged that each resort may be studied without waste of time from the following points of view: (1) visit to the springs and establishments under the direction of the physicians of the locality; (2) lecture on the therapeutic application of the waters and the other therapeutic features, such as climate, altitude, exercise, mechanotherapy, etc.; (3) excursion to gain a view of the general configuration of the country.

The medical tour of 1910 will take place from September 1 to September 15, under the scientific direction of Professor Landouzy, dean of the Paris college of medicine. It will comprise the resorts of Savoy and of the Dauphiné: Hauteville, Evian, Thonon, Saint-Gervais, Salins-Moûtiers, Brides, Pralognan, Challes, Aix-les-Bains, Marlioz, LeRevard, Allevard, La Motte, Uriage. For all particulars, inquiry may be addressed to Dr. Carron de la Carrière, president of the Société d'Hydrologie Médicale de Paris, 2, rue Lincoln, Paris, France.

Dédication of the Monument to Horace Wells

On March 27, under the presidency of Professor Dastre, member of the Académie des Sciences and of the Académie de Médecine, a monument was dedicated to the memory of the American surgeon-dentist Horace Wells, who in 1844 conceived the idea of applying to dentistry the anesthetic properties of nitrous oxid, which had been discovered under the name of "laughing gas" by Humphrey Davy in 1799. The method of Horace Wells was, however, perfected by Paul Bert, whose researches led to the possibility of obtaining a lasting general anesthesia by the mixture of nitrous oxid with oxygen. The monument is by the sculptor Bertrand Boutée, and is erected in the Place des Etats-Unis. The bust of Wells stands on a pedestal of white marble, on which is sculptured a medallion bearing the head of Paul Bert. It bears the inscription "A Horace Wells, *novateur de l'anesthésie chirurgicale.*"

Third Congress of Practitioners

The third organized meeting of the rank and file of the profession to discuss exclusively practical questions met at Paris, April 7-10, with Dr. Gairal of Carignan, president of the Union des Syndicats médicaux de France, in the chair. There were 1,100 members enrolled, not counting the inscription of a certain number of medical associations. The first meeting of the kind, held at Paris in 1907, was attended by 1,500 members and the second, at Lille in 1908, by 1,200.

UNRESTRICTED CHOICE OF PHYSICIAN

The discussion of this subject, introduced by Dr. Bolliet of Lyons, ended in the adoption of resolutions endorsing the unrestricted choice of the physician in the sick benefit and mutual aid societies, and the treatment of the well-to-do among the members of the aid societies on the basis of ordinary patients. Dr. P. Vallat of Joinville-le-Pont dealt with the question of the free choice of the physician in the large corporations, asserting that the medical service of the great companies as at present organized fails to respect the dignity and the individual liberty of the sick, while it is at times accessible to the influence of the powerful to the detriment of the humble and of the physician's independence. He therefore proposed, and his resolution was adopted, that the unrestricted choice of the physician should be made compulsory in the administration of public and private services and industrial undertakings.

REFORM IN THE METHODS OF MEDICAL TEACHING

The agitation on this subject which has been maintained fo some years in the French medical profession found utteranc at the meeting, and the attacks, often rather discourteous directed against the "officials" rendered decidedly uncomfortable the situation of the few professors, such as Drs. Pinard and Hayem, who felt it their duty to take part in the meeting Dr. Lafontaine of Bordeaux in his paper insisted especially o the necessity of the suppression of the *agrégation* and protested against the present system of the *concours* and the favoritism which governs it. The essayist thought that the reform in medical teaching ought to be the work of practitioners themselves, and that it could be brought to a satisfactory conclusion only by the medical syndicates. The question, he believed, ought to be entrusted to a committee on reform, composed of equal numbers of those already holding medical offices and of representatives chosen by the practitioners at large. Professor Pinard expressed regret at seeing an antagonism between the "officials" and practitioners; for his part he knew only physicians. He feared that the campaign undertaken against the instruction in the medical colleges would bring discredit on physicians and reduce their prestige. He protested also against the statement that favoritism played an essential part in the *concours*. He declared himself personally a strong partisan of the system of the *concours*, which might be improved, but ought not to be suppressed. In spite of this wise advice, however, Dr. Lafontaine's conclusions were adopted.

The meeting, moreover, passed the resolution that for questions of medical instruction the Conseil médical supérieur de l'Instruction publique is an incompetent institution from a medical point of view since among its fifty-three members there are only three physicians and it ought to be replaced by a superior medical council composed of members of the teaching body and of an equal number of delegates chosen by the various professional societies.

ABORTION FROM THE MEDICOSOCIAL POINT OF VIEW

In his paper, Dr. G. Bertillon of Maisons-Laffitte showed the constant increase of the number of abortions. Professor Lacassagne estimated that there are at Lyons 19,000 abortions to 450,000 births, and that the number of induced abortions in Paris each year is not less than 150,000. Abortions are practiced especially by the midwives, who are too numerous to be able to earn a livelihood. The essayist, therefore, proposed to limit the number of midwives in order to shield them from unwholesome temptations. This resolution was adopted by the meeting, but the other two conclusions of the paper, one in regard to the oversight of midwives and the other in regard to the compulsory report of every miscarriage, natural or induced, were rejected. Professor Pinard especially protested energetically against every proposition to do away with the obligation of professional secrecy and to make a spy of the physician.

LIMITATION OF THE NUMBER OF MEDICAL STUDENTS

The meeting, while voting against the idea of a *concours* of admission for entrance to the medical colleges, believed that it was necessary to limit as much as possible the number of medical students, which is continually increasing. Accordingly it resolved (1) that the examinations should be more severe and every student who fails three times at one examination should be definitively excluded from all the medical colleges, and (2) that the number of colleges and schools, which have increased greatly since 1870, should be reduced.

SANITARY LEGISLATION

The meeting resolved that the responsibility of reporting epidemic diseases should rest solely on the head of the family or the one who takes his place, instead of on the physician as at present. Another resolution adopted demanded that the director of a bureau of hygiene should be a physician and one who had practiced medicine for at least five years.

ORGANIZATION OF THE HOSPITALS

Dr. L. Archambault of Paris emphasized especially the excessive centralization of the Assistance publique (Public Charities) and recommended the system of the autonomy of each hospital. After the reading of this paper and several other communications on the administrative organization of hospitals in foreign countries, and especially a communication from Dr. Koenig of Paris on the organization of the hospitals in the United States, and trained nurses, the meeting adopted the following resolutions: 1. In each hospital the physicians should have an active part in the administration. 2. The hospital should have administrative and financial autonomy and should be governed directly on the spot, and not from a distance and on paper by an irresponsible administration. 3. In France, as in certain foreign countries, the chief should be a physician aided by an administrative assistant. 4. These resolutions were to be sent to all the hospital physicians in France with the request that they sign a petition demanding from the ministry of the interior, in the interest of patients, the autonomy of the hospitals. 5. The vigilance committee is to study the causes of the bad administration in French hospitals and to communicate the results to the press.

BERLIN LETTER

(*From Our Regular Correspondent*)

BERLIN, April 6, 1910.

Industrial Insurance Discussion

The organized medical profession has been summoned to meet in Berlin, April 17, for the discussion of the provisions of the new bill for imperial industrial insurance. So far as can be judged from expressions in the medical press, it is recognized that the new bill introduces many important improvements over the first, but on the other hand, there are some essential demands to be met, without which peace between physicians and the sick benefit societies (Krankenkassen) cannot be expected. Especially there is a demand for a more favorable attitude of the law toward the free choice of physicians. It is to be expected that the medical association at this special session will express itself to this effect.

Permanent Commission for International Medical Congresses

The permanent commission for international medical congresses, appointed at Budapest, held its first executive sitting, March 29 and 30, at the Hague. Delegates were present from Germany, France, England, Italy and Holland. The chief matter of business was the provisions for the full meeting, that is to take place later. The subject of discussion was a suitable organization of international congresses, especially so as to avoid collision between general and special congresses.

Personals

Professor Krönig, of Freiburg, has unexpectedly declined the call to the directorship of the gynecologic clinic at the Charité, as successor of Bumm. It is rumored that there is an understanding that the Baden government will soon build a new gynecologic clinic at Freiburg for Professor Krönig and under his direction.

The surgeon, M. Hirschberg, of Frankfort, died recently, at the age of 67. On his return from the annual meeting of the Gesellschaft für Chirurgie he was attacked with heart failure in the carriage that was taking him home. Hirschberg was a well known surgeon who has shown much scientific activity.

Professor Schutz, director of the pathologic institute at the Berlin veterinary college, celebrated April 16 the semicentennial of his professorship. He is well known in human pathology, especially for work on the etiology of tuberculosis.

Annual Meeting of the German Surgical Society

In Easter week, as usual, the German Roentgen Society, the Orthopedic Society and the German Surgical Society met in Berlin. In addition there occurred this year the first meeting of the Society for the Care of Cripples, which was largely attended by physicians, ministers, teachers and the superintendents of homes for cripples.

Of all these meetings, that of the Gesellschaft für Chirurgie was most interesting. Among the most important subjects there was first the "Surgical Treatment of Epilepsy." The Berlin surgeon, Professor Krause, who is recognized in consequence of wide experience as one of the foremost authorities in the field of surgery of the central nervous system, reported on the non-traumatic form. He based his report on 88 cases which he had treated during the last 8 years. Of these 50 were cases of Jacksonian epilepsy. All cases due to acute infection and to hysteria were excluded from surgical treatment. Only such cases as are due to new formations or occur as a sequel of infantile cerebral paralysis or in which the etiology is doubtful, are suitable for surgical treatment. In all cases of these three groups excision of the focus of the muscle group that is first affected is to be undertaken. The center is to be determined by faradic stimulation of the exposed motor region by long slender electrodes and a current so weak that it produces only sensation but no fibrillary contractions when applied to the tip of the tongue. The extensive paralyses that appear immediately after the operation gradually recede. Krause obtained 5 complete cures and many improvements. In general epilepsy the results were not so favorable. In these cases he made Kocher's operation (formation of a valve —*Ventilbildung*). Professor Tilmann of Cologne advised primary trephining at the point of injury in the treatment of traumatic epilepsy. He operates always in one stage. In his 26 cases 60 per cent. of the patients were cured, 10 per cent. improved, and 7 per cent. died. In the discussion Professor Garrè (Bonn) warned against too early recourse to operation in genuine epilepsy, lest the operation fall into disrepute. Only such cases should be submitted to operation as have withstood all the resources of internal therapy. Professor Braun (Göttingen) reported a case of traumatic epilepsy in which the patient was operated on by removal of part of the cortex twenty years ago and has since remained well. He recommends caution in the interpretation of successes after operation on account of the possibility of spontaneous improvement and cure.

Professor W. A. Freund, formerly director of the gynecologic clinic at Strasburg, now of Berlin, discussed the "Surgical Treatment of Stenosis and Rigid Dilatation of the Thorax." Both these deformities of the thorax occur as primary affections and produce injurious effects on the lungs. The first deformity is attributable to an arrest of development of the left costal cartilages. The result of this is a functional disturbance and change of form in the apex of the lung which invite the tubercle bacilli to settle there. Changes in the costal cartilage are also the cause of rigid dilatation of the entire thorax. Pulmonary emphysema is brought on by the position of the thorax in inspiration produced in this way. Not every tuberculosis of the lung nor every case of emphysema, however, is to be attributed to a primary deformity of the chest. The operative mobilization of the upper opening of the chest by excision of a piece of the cartilage of the first rib, imitating the mobilization which sometimes occurs spontaneously, produces a change in the apex of the lung and makes the cure of tuberculosis possible. The operation should be made only in case the tuberculous affection does not extend below the cartilage of the second rib. For mobilization of a rigid thorax, resection of pieces of the costal cartilages from the second to the fifth is recommended; but this chondrotomy is only indicated when atrophy of the lungs and of the diaphragm has not occurred as a result of the emphysema. The determination of the latter condition is possible according to the investigations of Professor Mohr (Halle), by ordinary clinical methods, including *x*-ray examination and spirometry. The forms of rigid thorax occurring in consequence of muscular spasm, as in the paralytic thorax and in the aged, should not be operated on. Bronchitis and bronchial asthma furnish no contraindication, but the contrary is true of disturbances in the circulation which cannot be removed by internal remedies. The operation should, moreover, be undertaken only in case the rigidity is of a really high grade.

Von den Velden (Düsseldorf) reported 10 operations for rigid dilatation of the thorax. Pieces of the cartilages of the second to the fifth rib were removed from the right side. The immediate result was striking in all cases and the permanent results were entirely satisfactory. Bronchitis was cured, the lung capacity increased at least 600 c.c., cyanosis disappeared, and even dilatation of the right heart was diminished. Seidel (Dresden), Friedrich (Marburg) and Stieda (Halle) reported permanent successes; other surgeons have had less favorable results.

The operation for appendicitis also received attention at this meeting. Professor Kümmell of Hamburg emphasized the fact that in opposition to the late attempt by Sonnenburg to treat beginning appendicitis in a more conservative manner, the surgical stand for early operation must be decisively maintained. It is not possible to draw a certain conclusion as to the pathologic process in the appendix from the symptoms present in the beginning of the affection or to make a correct prognosis in the early stage. Neither the leucocytosis nor the viscosity of the blood nor Arneth's blood picture permit a certain prognosis at an early stage. Kümmell warns, with especial earnestness, against the treatment by castor oil, recently reintroduced by Sonnenburg in the beginning of appendicitis. In a large series of cases he had found only 0.5 per cent. mortality after early operation, but the entire mortality of interval operations, if abscesses and peritonitis are included, rises to 6 per cent. The danger of interval operation is underestimated by practitioners. The mortality in case of abscess and peritonitis amounts to 20 per cent. Sonnenburg gave great weight to the prognostic importance of the leucocytes, not so much the absolute number as the distribution of the individual forms outside of the blood. The higher the relative number of mononuclear leucocytes the more unfavorable are the chances for the system. Only from a study of these biologic conditions and by a control of his views in many cases of mild appendicitis had he given castor oil in the expectant cases. He had no intention of introducing a new general treatment for acute appendicitis. As a practicing surgeon he advocated unconditionally the early operation. The justification of his trials in the hospitals is furnished by the fact that the mortality in his institution is not higher than that in other places. Professor Kocher of Bern agreed in all points with the views of Kümmell. According to his experience Arneth's blood formula gives no information so long as the disease is confined to the appendix itself. It is decisive only when the affection has become more extensive and then the most favorable time for operation has already passed. The other speakers expressed the same views so that the president of the congress, Professor Bier, was able to determine at the close of the debate that in this important question of early operation there was absolute unanimity in the position of surgeons.

In the treatment of "Tuberculosis of the Peritoneum" Professor Friedrich (Marburg) on the ground of experimental investigations, had injected into the peritoneal cavity as much as 20 c.c. of official glycerin in children, in adults as much as 40 c.c. and repeated the injection as many as eight times. His impression was that the course of the disease was very favorably influenced. The tuberculin treatment was very warmly recommended by others. Professor König (Altona) and Hohmeyer made a report on the present status of spinal anesthesia on the basis of a collective inquiry among leading German surgeons. Half of the German surgeons who have employed it no longer use it. In 2,400 cases which are included in the report, stovain, tropacocain and novocain were chiefly used. Side effects were frequently observed. The speakers came to the conclusion that spinal anesthesia should be employed only when local anesthesia and primary ether anesthesia, the *Aetherrausch*, are not possible and the inhalation method is contraindicated.

VIENNA LETTER

(*From Our Regular Correspondent*)

VIENNA, April 7, 1910.

Women and Children in Factories

The report of the social committee of the Austrian parliament has been now issued; the part dealing with the work done by women and children is very interesting. About 30 per cent. of all the school children are employed in household or factory industries. The country school children are much oftener made laborers at an early age than those residing in cities, because the rural population is not so much under supervision as in cities; we have in this country compulsory schools, but the inspectors in the country are sometimes, especially during the summer, very lenient. On the other hand, the lack of laborers is felt more keenly in the country than in towns; the proportion of children's labor must be considered as an exponent of the social standards of the various parts of population. Similarly, factory work done by women is a proof of the degree of social development. The Austrian law now prescribes that night work must not be done by girls under 18; formerly the limit of age was 16. Even then females are to be kept away as much as possible from work of this kind unless necessity (accidents, war, abnormal weather) compels it. In each instance the inspector of labor must be informed of the fact, and if such employment exceed two weeks the magistrates must give their written permission, for a period not exceeding forty days in the year. In seasonal work only sixty days may be permitted. A woman past the fifth month of pregnancy may under no circumstances be employed at night work, nor any woman who has a child less than two months old.

Conference on the Care of the Feeble-Minded

The fourth meeting of the Austrian Society for the Care of the Feeble-Minded was held a few days ago in Vienna, and was very interesting, being composed of all classes of persons engaged in practical and theoretical work of this kind—medical men, teachers, inspectors of schools, and special tutors. The necessity of special institutions for feeble-minded persons was recognized in this country not longer than twenty-five years ago. Since then philanthropists and magistrates have erected one or more institutions of this kind in nearly every capital city of the Austrian states. More than 50 per cent. of all children who were inmates of such institutes twenty-five to fifteen years ago, have become fit for a lunatic asylum or are certified lunatics under family care. Only 20 per cent. of all feeble-minded persons, who have received special instruction, are able to earn part of their living and thus to lessen the burden of their family. Nearly all the other 30 per cent. perished before attaining the age of 35. The blind, the deaf-mute and the crippled were also considered in the proceedings of the congress. There are in Austria all together eight large institutions for deaf-mute children, and the teaching is oral, without exception; the results are as a rule excellent as regards the possibility of keeping up a conversation and several pupils of these schools have been able to attain good positions in social or commercial life. They are not feeble-minded; nor could the blind be included logically among the subjects of the conference, but they were considered.

Prof. von Wagner read a paper on his method of treating idiots with extract of thyroid. There are in certain Austrian mountain districts colonies of these unhappy individuals. The professor has been appointed by the government to investigate the problem, and by giving the thyroid extract, it has been possible to improve the mental activity, the growth and general health of 80 per cent. of all idiots in this country. In children, an increase of the height by 2 to 5 inches within one year, with a striking gain in intelligence was observed nearly without exception. Prof. von Wagner recommended the use of thyroid in all cases of feeble-mindedness of uncertain etiology.

Lunatics and Political Difficulties

The political difficulties of the government in Bohemia have led to a curious result in the Bohemian lunatic asylums. As there was no budget granted in this country, the expenditures to be controlled by the budget cannot be made. All grants to medical institutes, all public buildings had to be stopped, and all patients paid for by the Bohemian revenue have had to be recalled from the hospitals. Among them were 820 lunatics, who were dismissed from asylums, in order to save expenses. This grotesque act, rather satirical than humorous, is perhaps meant only to bring the political parties to their senses. But at all events the danger of releasing insane persons has caused tremendous indignation all over the country, especially in medical circles, and the Diet of Bohemia is bitterly blamed for such an absurd decision.

Pharmacology

REVISION OF THE PHARMACOPEIA

Preliminary Report from the Committee of the Section on Obstetrics and Diseases of Women

On Dec. 19, 1909, Dr. John G. Clarke, Chairman of the Section on Obstetrics and Diseases of Women of the American Medical Association, appointed the undersigned committee to suggest such changes in the Pharmacopeia, as the experience of gynecologists and obstetricians throughout the country would seem to justify. The following preliminary report of the results of our investigation are now presented in order that the information gained may be utilized at the meeting of the Pharmacopeial Convention, held May 10, at Washington. The final report will be submitted to the members of the Section, at the regular meeting of the Association in Saint Louis, June 7.

In order that the recommendation of this committee might go to the Pharmacopeial Convention, not merely as the opinion of one or two members but as an expression of the approval or dissent of several hundred members of this Section, it was decided to employ the return-postal ballot to find out what was the opinion of the majority. Through the generosity of THE JOURNAL of the American Medical Association the necessary printing and mailing was done without any expense to the Section. In order that all the members might vote with an intelligent understanding of the important points involved, there was sent to each member the following circular:

"As a member of this Section you are asked to express your opinion regarding the advisability of admitting certain preparations more generally used in the practice of your specialty into the 1910 revision of the U. S. Pharmacopeia. The special committee, appointed by our chairman, Dr. John G. Clarke, to consider the subject of these proposed changes, has deemed it best to take a vote of the members of the Section on the important points involved before March 25, so that the report can go to the Pharmacopeial Convention in May as expressing in great part the opinion of this Section.

"If this were not done and the report not submitted until the regular meeting of this Section in June, its influence on the Pharmacopeial Convention would be lost. It would be manifestly unjust and unwise to include in our Pharmacopeia any preparation whose name is trademarked or whose mode of manufacturing is patented. To obviate this very serious drawback in our copyright laws, we must employ the expediency of introducing these substances into the Pharmacopeia under new names.

"Your committee has therefore deemed it wise for you to express your opinion, not, for instance, on the relative merits of ergone, ergotol, ernutin, etc., but on the desirability of a purified concentrated preparation of ergot. If the physicians of the country think such a preparation a necessity, it becomes the duty of the committee on Revision of the Pharmacopeia to suggest a method of manufacture, standard tests, and a suitable name. What applies to ergot is true of the other six preparations concerning which you are asked to express your opinion. The technical difficulties regarding an accurate method of standardization can be safely left to the Committee on Revision. What your committee desires to know is which of these preparations have so far proved their usefulness as to justify inclusion in the Pharmacopeia.

"Your vote can readily be expressed on the enclosed postal card as directed. Please return it at once, so that the vote may be as complete as possible."

This circular was enclosed in an envelope, together with a post card addressed to the chairman of the committee, on the back of which was printed the following:

Do you favor the introduction into the next Pharmacopeia of the following. Indicate YES or NO by a cross (X):

YES NO	1. A purified concentrated preparation of ergot for hypodermic use (such as ernutin, ergone, etc.).
YES NO	2. A non-irritating silver solution (such as argyrol, protargol, etc.).
YES NO	3. A liquid preparation of the adrenal gland (such as adrenalin, adrin, etc.).
YES NO	4. A preparation of cotarnin (such as stypticin, styptol, etc.).
YES NO	5. A less toxic form of cocain (such as eucain, novocain; stovain, etc.).
YES NO	6. An extract of ovarian tissue and of the corpus luteum (such as lutein, etc.).
YES NO	7. A counter-irritant preparation similar to ammonium ichthyol-sulphonate (ichthyol).
YES NO	8. Do you favor a simplified name for hexamethylenamin (hexamin)?

Do you favor retention of the following preparations found in the 1900 Pharmacopeia? Specify by a cross (X) which you would retain: Gossypii cortex, viburnum prunifolium, viburnum opulus, cerii oxalas, glyceritum hydrastis, zea, uva ursi, hedeoma, oleum hedeomæ, vinum ergotæ.

Owing to the large number of members of this Section THE JOURNAL felt that it would suffice to send the circular and postal card, to every other member on the list of membership. Of the 500 communications thus sent out, replies were received from 196. The interest shown in the subject is indicated, not merely by the number of replies, but by the care taken in the consideration of each special topic brought up for discussion. In many instances, the vote was not merely expressed by "yes" or "no," but by additional comments. An analysis of the vote cast follows:

1. A purified concentrated preparation of ergot for hypodermic use.

The vote on this question was, 182 yes; 13 no; not voting, 1. Which one of the various methods in isolating the active principle of ergot will prove to be best is a question to be determined by the members of the Committee on Revision. The essential thing is that the preparation shall be free from inactive or irritating substances; that it should be aseptic and concentrated, so as to be suitable for hypodermic use, and that physiologic standards should be required to test its efficiency.

2. A non-irritating silver solution. The vote was 186 yes, 7 no, and 3 not voting. The irritation caused by the injection of silver nitrate in cases of cystitis, and in the prophylactic measures employed against ophthalmia of the new-born has led practitioners to favor the less irritating silver solutions, such as argyrol, argentamin, etc. It would seem that considerable difficulty will be found in establishing accurate chemical tests for the proper manufacture of such a preparation of silver, but that it is wanted by the profession is clearly shown by the vote.

3. A liquid preparation of the adrenal gland. The vote was 185 in favor, 5 against, and 6 not voting. Physiologic tests will be required to determine the efficacy of this product also.

4. A preparation of cotarnin. The fact that 31 of the replies left this question unanswered would indicate that a considerable percentage of the profession is still ignorant of its value as a uterine hemostatic. Nevertheless, the fact that of the remaining 165 votes, 123 favored the introduction of this substance into the Pharmacopeia, and only 42 opposed it, would justify its recommendation by the committee.

5. A less toxic form of cocain. There seemed to be practical unanimity of opinion regarding this substance. One hundred and seventy-six favored its introduction, 12 opposed it, and 8 did not vote. The great number of preparations of this sort that have been put on the market justify the belief that some equally good method of isolating a less toxic form of cocain, can be worked out by the Committee on Revision. It is hoped that, in naming this substance, a short synonym will be provided, in order to facilitate its competition with the proprietary substances already on the market.

6. An extract of ovarian tissue and of the corpus luteum. Of all the substances submitted to vote, this was the only one that failed to secure more than a bare majority. There were 99 voting yes, 67 voting no, and 28 not voting. If the Pharmacopeia is to include only these drugs that have the unequivocal indorsement of the profession, we are not justified, from the vote, in recommending the inclusion of an ovarian extract into the Pharmacopeia. It is probable that in the next five or ten years, our knowledge of the manufacture and physiologic action of these organic extracts may be so much improved as to justify their admission into the Pharmacopeia, but for the present we ought to assume a conservative standpoint.

7. A counter-irritant preparation similar to ammonium ichthyol-sulphonate. The vote stood, 166 yes, 19 no, and not

voting 8. There seems to be no reason why this substance should not be admitted to the Pharmacopeia, as its use in gynecology, as well as in other conditions, has been sufficiently demonstrated. Owing to the copyright laws in this country, it would not be advisable to introduce the substance into the Pharmacopeia under its ordinary name of ichthyol. The chemical name, on the other hand, is too cumbersome for the practitioner's use. We trust that some simple synonym, of not over three syllables, will be adopted.

8. A simplified name for hexamethylenamin. One hundred and eighty-one favored a simplification, 9 opposed it, and 6 did not vote on this question. The nomenclature of substances in the Pharmacopeia is of considerable importance. It should serve two purposes: one, to indicate the correct chemical composition of the preparation, as nearly as possible; the other, to give a short easily remembered name, for everyday use, by the practitioner. These abbreviations of chemical terms should not, as in the case of hexamethylene tetramine, consist merely of the elimination of two syllables ("tetra"), but the name should be cut down to such a simple form as "hexamin," even if, chemically, such an appellation means little or nothing. If the U. S. Pharmacopeia is to compete with proprietary medicines, its terminology must be simplified for use by the busy general practitioner.

Ten substances in the Pharmacopeia, primarily used by gynecologists, were placed on the postal card ballot, with the view of determining whether they should be retained in the next edition of that book. The vote on these ten products was as follows:

1. Hedeoma.—The vote was 179 in favor of exclusion, 17 of retention.
2. Oleum hedeomæ.—The vote was 179 to exclude it and 17 to retain.
3. Vinum ergotæ.—The vote was 173 to exclude it and 23 to retain it.
4. Zea.—The vote was 171 to exclude it, 25 to retain it.
5. Gossypii cortex.—The vote was 154 to exclude it, 42 to retain it.
6. Glyceritum hydrastis.—The vote was 137 to exclude it, 59 to retain it.
7. Viburnum opulus.—The vote was 128 to exclude it, 68 to retain it.
8. Uva ursi.—The vote was 118 to exclude it, 78 to retain it.
9. Cerii oxalas.—The vote was. 79 to exclude it, 117 to retain it.
10. Viburnum prunifolium.—The vote was 71 to exclude it, 125 to retain it.

There can be no question that physicians, as a whole, do not use the first five of these preparations enough to justify their retention in the Pharmacopeia, and likewise no question but that cerium oxalate, and viburnum prunifolium apparently give results in the hands of many physicians, so that they should be retained. What disposition should be made of the remaining three preparations (*glyceritum hydrastis, uva ursi*, and viburnum opulus), may be left to the discretion of the Committee on Revision.

FRED J. TAUSSIG, Chairman.
HENRY T. BYFORD.
GUY L. HUNNER.

PHENOLPHTHALEIN

Phenolphthalein has long been used as an indicator in chemical reactions, but its use as a therapeutic agent[1] is comparatively new. When its laxative properties were first discovered it was exploited as a proprietary in Germany, and it was not long before the enterprising manufacturers in this country saw in it a potential gold mine and now nearly every proprietary drug manufacturer in this country has coined a proprietary name for it and is exploiting it, either alone or in combination with one or more other laxatives, and with more or less unwarranted claims.

Phenolphthalein itself has certain pretty well defined properties, but when a little of some other drug has been added wonderful therapeutic possibilities are claimed for the combination. The drug also has a definite market value and the pure substance in the form of powder, tablets or pills could not be sold at a price greatly in excess of the market value. *Thus manufacturers*, from business policy, add to it other drugs.

There are now on the market numerous more or less secret and "fancy" preparations of phenolphthalein for which a price is charged out of all proportion to the value of the preparation. Among these are Phenolphthalein Laxative (El Zernac Co.), Exurgine (sold by Bischoff & Co.), Probilin (Schering & Glatz), Prunoids (Sultan Drug Co.), Laxine (Columbus Pharmacal Co.), Phenolax Wafers (Upjohn Co.), Laxaphen (Parke, Davis & Co.), Phenalein (Pax Chemical Co.), Thalosen (Abbott Alkaloidal Co.), Laxothalen Tablets (Pitman-Myers Co.), Veracolate (The Marcy Co.) and a number of others, perhaps. And additional preparations are still coming out.

Some of the preparations contain only the phenolphthalein with a coined non-descriptive proprietary name attached, but most of them contain in addition one or more of such drugs as cascara, sulphur, prune, senna, salicylic acid, ipecac and aromatics. The exploitation of phenolphthalein in this way gives opportunity to the manufacturers to make all sorts of strong claims, some of them directly contradictory, for their preparations. For instance, Phenolax, which is said to contain phenolphthalein and cane sugar, is claimed to be "a great success for all forms of constipation, intestinal atony and hepatic torpor." Of Laxothalen, which is said to contain phenolphthalein, aromatics and sugar, it is stated that "its action is confined to the bowel and it has practically no hepatic action." Of Prunoids, which is said to contain phenolphthalein, cascara, de-emetized ipecac and prunes, we have the old familiar statement that "the harmonious blending of the several ingredients will give results that cannot be obtained through their use separately, nor will their use be followed by after-constipation."

At the time phenolphthalein was beginning to be exploited in this country THE JOURNAL[2] suggested that physicians who wished to try the remedy should prescribe it under its own name and not under fancy, coined names. Since phenolphthalein occurs in the form of an insoluble and tasteless powder there is no reason why special pharmaceutical preparations of it should be placed on the market. It can be prescribed in powder form, in pills, capsules or tablets. Thus given, the true therapeutic action of the drug would be apparent and its actual value arrived at.

The vice of this unscientific habit of prescribing names instead of drugs is stated in a forcible way in a letter received from Dr. V. E. Simpson, a teacher of materia medica and therapeutics in the medical department of the University of Louisville. He says:

"Recently P. D. & Co.'s representative left on my desk a sample labeled 'Laxophen.' The formula given is: phenolphthalein, gr. viii; salicylic acid, gr. 3/5, *in each fluid ounce*, 'incorporated in a palatable chocolate base.' Now, in the first place, this name is one that the public will easily learn and will soon call for; in the second place, it is not a name that carries with it even a suggestion of its contents; and, finally, the physician acquires the habit of mechanically prescribing names instead of drugs, and in the burdening of his memory with the myriad of fantastic labelings he finds it impossible to remember even the drugs any one contains, much less the exact proportions of those drugs. Then suppose that a consultation is had; the consultant asks what is being given and the attendant answers that he is giving 'laxophen.' The consultant, perhaps, has not been sampled and inquires about it; the attendant must answer, 'Oh, it contains some phenolphthalein and a salicylate, but I have forgotten the exact proportions. I have the literature on my desk. Had he used U. S. P. and N. F. remedies, which the consultant and every other doctor in the land has access to and should have some knowledge of, this embarrassment would not occur.'"

All of the above should remind the physician that he should write simple prescriptions, for drugs whose action he knows, adapted to the particular case and not the money-making combinations under fanciful, non-descriptive names exploited by the proprietary manufacturers. In this way he will not only save money for himself and his patients, but he will be giving them exact and effective treatment, he will know exactly what he is giving and learn for himself its effect, and he will be following the only method which entitles him to be called a scientific physician.

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[1] Those who wish to study the action and use of this drug further will find references to articles in THE JOURNAL as follows: THE JOURNAL, Jan. 5, 1907, pp. 64 and 70; March 30, 1907, p. 1133; April 20, 1907, p. 1351; Nov. 21, 1908, p. 1782; Nov. 28, 1908, p. 1886. The first page mentioned discusses the introduction of phenolphthalein into medicine.

[2] THE JOURNAL, March 30, 1907, p. 1133.

Correspondence

The Careless and Criminal Use of the Mercuric Chlorid Tablet

To the Editor:—The report in The Journal, April 9, of a peculiar case of mercurial poisoning prompts me to make this communication. Such cases are not so uncommon as Dr. Lankford thinks. The use of these tablets has become common and druggists sell them without observing the requirements of the law as to the sale of poisons.

Several years ago a girl was given these tablets by her physician for a vaginal wash, with oral instructions as to their use. She ignorantly inserted a 7½ grain tablet into the vagina. As she suffered great pain, another physician was called in, who finding the cause, used local washes to allay the effects. Later, symptoms of mercurial poisoning developed. I then came into the case and attended the patient until she died some two weeks later. The case pursued the course so well described by Dr. Lankford. Last year a young farmer from an adjacent county came here with his bride. He procured a supply of "antiseptic" tablets from a druggist of his county and after intercourse with the young wife placed a tablet in the vagina. Result, death some ten days after in one of our hospitals. The husband was indicted for murder, convicted of involuntary manslaughter, and is serving out his time in jail. In his testimony he said that he and the girl had been having illicit intercourse for some time and that they had been using some kind of antiseptic tablet to prevent pregnancy and that he was ignorant of the difference between the two kinds.

A druggist told me that he had seen reports of several such cases in his journals. A married patient consulted me about using a wash recommended to her by one of her friends to prevent conception. To my astonishment she brought out an unbroken bottle of 7½ grain antiseptic bichlorid of mercury tablets containing several hundred. How or where she procured them I did not learn. After my talk to her, however, she did not use them.

A young man visiting in the city at the annual encampment of one of the semimilitary orders, procured at a drug-store some "blue" tablets to use after a visit in the red light district; also some migrain tablets for a headache, from which he was suffering. He carelessly took the blue tablet; prompt attention at the drug-store by one of our physicians saved him. While he was being treated in the rear of the store another young man of the same order entered in front to get blue tablets for similar uses, but he failed to get them. I know of one case of fatal mercurial poisoning from long-continued bichlorid vaginal douches, ordered by a surgeon and kept up by the patient's family physician.

Doubtless there are many cases in which the bichlorid "blue" tablets are kept near the fountain syringe for use to prevent conception. So it behooves physicians and druggists to exercise caution as to prescribing and dispensing these very actively poisonous but innocent looking tablets.

W. H. Sharp, Parkersburg, W. Va.

A Proposed Section on Genito-Urinary and Venereal Diseases

To the Editor:—While attending the last meeting of the American Medical Association at Atlantic City I presented a resolution, which had previously been unanimously passed by my state society, requesting the House of Delegates to organize a new section to be known as the Section on Genito-Urinary and Venereal Diseases. I briefly enumerated then the reasons for the organization of this section. I shall recapitulate a few of the most important reasons. At present anyone presenting a paper on a genito-urinary subject might be assigned to the Section on Surgery, where we all know it would receive rather an indifferent reception. One presenting a paper on syphilis would be assigned to the Section on Dermatology. At the last meeting the Section on Cutaneous Medicine and Surgery changed its name to Section on Dermatology; hence a close demarcation in classification would naturally exclude syphilis, as syphilis is not a skin disease exclusively just because it has a skin manifestation, any more than it is a nervous disease because it is an etiologic factor in producing paresis and locomotor ataxia. Syphilis is a disease of the whole organism and no cell in the body enjoys immunity from its attack. I consider genito-urinary diseases and syphilis more closely allied than are skin diseases and syphilis, as genito-urinary specialists as a rule treat more syphilis than do dermatologists. The laity classify genito-urinary diseases and syphilis together, and therefore they call on the genito-urinary specialists, and not the dermatologists, when afflicted with any venereal disease. Our standard American text-books on the subject, such as White and Martin, Taylor, Keys, etc., include genito-urinary diseases and syphilis, and these authors are the ones that are more frequently quoted as authority on syphilis than any of our dermatologists. This same rule holds good with most of the European authorities.

When I presented my resolution it was referred to the Committee on Sections, and here it met with opposition from the Section on Cutaneous Diseases and Surgery and the American Urological Association. The latter was a surprise. The Section on Cutaneous Diseases and Surgery thought that the Section on Genito-Urinary Diseases and Venereal Diseases would take syphilis away from their section, when on reflection, they might know, they can go on in either section and have as many papers on syphilis as desired, the two sections would not conflict at all. The Section on Nervous and Mental Diseases last year had a symposium on the new pathology of syphilis. Syphilis is a disease that can be discussed in any section of the American Medical Association, as it does not belong exclusively to any one. The American Urological Association thought that the section was intended to disrupt that society and it made such a bitter protest that in the interest of peace and harmony it was invited to come in as a body and participate in the transactions of this new section, but it passed a resolution rejecting the offer. As the American Urological Association is an independent organization, and in no way related to the American Medical Association, it has no right to dictate what section should exist in the American Medical Association. Furthermore, the American Urological Society is purely, as its name implies, a urological society, and will not allow any papers on its program that take up the discussion of the genital portion of the urinary tract, such as an article on any genito-urinary disease of gonorrheal origin. The papers as a rule consist of articles on the capital surgery of the kidneys, prostate and bladder, whereas an average genito-urinary specialist has several hundred cases of the minor genito-urinary diseases in his office work to one of a capital nature.

The section I desire to be organized is to be more strictly a section for the study of genito-urinary and venereal diseases, such as diseases of the spermatic cord, prostate, urethra, external and internal genitals, whether of gonorrheal origin or from any other cause. Possibly the term "andrology" would be appropriate and more acceptable to some. The work in this section would in no way conflict with the American Urological Association or the Section on Dermatology, but would encompass a class of diseases that would be of interest to the genito-urinary specialists and of great interest to the general practitioner, as they frequently meet this class of diseases in daily practice. It is not my object to create any antagonism and I think that after mature reflection the members of the American Medical Association will see that such a section can be organized without antagonizing any other section and be productive of excellent work.

The committee last year returned the resolution to the House of Delegates, which approved it, stating that if one hundred members would sign a petition requesting the organization of such a section the section would be created. As I was a member of the House of Delegates and will be again this year at the coming meeting in St. Louis, I wish to present the resolution again for approval and desire the support of all members of the American Medical Association who are interested. I therefore ask all members who are in favor to write me in the following form:

To the Hon. House of Delegates:

I hereby approve of the organization of a new section to be created in the American Medical Association, to be known as the Section on Genito-Urinary and Venereal Diseases and pray you will organize such a section at your next meeting in St. Louis, June, 1910. If such a section is organized I will give it my support.

Name..............................
City..............................
County..............................
State..............................

I shall appreciate receipt of these by return mail, so I can attach the replies to my petition to be presented to the House of Delegates at the coming meeting in St. Louis, in June.

EUGENE CARSON HAY, Hot Springs, Ark.
102 Exchange Street.

A Proposed Section on Physical Forces in Medicine and Surgery

To the Editor:—A petition will be presented to the House of Delegates at the St. Louis session asking that a section be created in which the physical forces, of whatever nature, in their relations to medicine and surgery, may have adequate opportunities for presentation and discussion. This petition has already been largely signed. As the time available to secure additional signatures is now short I would like those in sympathy with this movement to write to me, or to Dr. William S. Newcomet, 3501 Baring street, Philadelphia, at once, stating their interest in the matter and promising to support the section if formed, and these letters will be added to the petition.

G. BETTON MASSEY, Philadelphia.
1801 Chestnut Street.

Finger-Nail Palpation

To the Editor:—I have practiced for several years past the method of perpendicular nail palpation of artery walls accredited to Wertheim-Salomonson in THE JOURNAL, April 16, page 1345. I consider it far more satisfactory and accurate than the usual method of palpating with the pulp of the fingers, and especially so in deep-seated or slightly hardened arteries, and to make sure when there is no hardening present.

W. F. ROCHELLE, Jackson, Tenn.

Book Notices

DISEASES OF GENITOURINARY ORGANS. Considered from a Medical and Surgical Standpoint, Including a Description of Gonorrhea in the Female and Conditions Peculiar to the Fmale Urinary Organs. By Edward L. Keyes, Jr., M.D., Clinical Professor of Genitourinary Surgery, New York Polyclinic Medical School. Cloth. Price, $6. Pp. 975, with 195 illustrations. New York: D. Appleton & Co., 1910.

This is practically a new work and embodies what has been proved reliable of the newer technic of the last few years. Operative procedures are grouped in a separate chapter and are described in an excellent manner. There is a chapter on the care and sterilization of various instruments, and the book throughout emphasizes the necessity of acquiring a true aseptic conscience, which is unfortunately still too rare among men handling pus cases. The importance of thorough, systematic and careful examination is emphasized and special attention paid to the laboratory side of diagnosis. Dr. Keyes makes a plea not only for an etiologic diagnosis, but for an exact, localizing, anatomic one as well. In discussing treatment a nice sense of discrimination is shown and principles are taught that can be easily followed.

There is a chapter on syphilis which is out of place in a work of this sort; also one on chancre and one on chancroid. Methods for determining the renal function are compared and the results analyzed, the phloridzin test and the importance of urea are emphasized. Gonorrhea is discussed from every angle—its social aspects, prophylaxis, relation to marriage, its real gravity, and remedies to limit its spread. There is also included a chapter on gonorrhea in women, which is a welcome addition. Stock vaccine is recommended in treatment, especially in cases complicated by epididymitis. The extragenital complications are briefly described, but arthritis should have been more fully gone into. Prostatitis, vesiculitis, stricture, stone, tuberculosis, are all treated in an excellent manner. Nephrectomy is advocated as the ideal treatment for renal tuberculosis, but in the epididymal infection expectant or palliative treatment is the plan to be followed. Epididymectomy may have to be performed, but rarely castration.

The illustrations are for the most part good, but those illustrating the passage of sounds are poor. There should have been more of them and more explicit directions with each picture.

The book is concise and free from padding. It covers the field of genitourinary diseases as nearly as any one work can, is lucid and up to date and has a smooth, readable style. It is an excellent book in every way.

SERUM DIAGNOSIS OF SYPHILIS AND THE BUTYRIC ACID TEST FOR SYPHILIS. By Hideyo Noguchi, M.D., Associate Member of the Rockefeller Institute for Medical Research, New York. Cloth. Price, $2 net. Pp. 173, with 14 illustrations. Philadelphia: J. B. Lippincott Co., 1910.

In this book the author treats the serum diagnosis of syphilis with a special view to the needs of laboratory workers, physicians and students. For this purpose he gives, first, a careful account of the essential facts in regard to hemolysis by serum and then of the power of combination of antigens and antibodies to fix complement and in that way to prevent hemolysis. The explanation, step by step, of complement-fixation on which the Wassermann test and all its variants are based is admirably clear and precise. The technical details of the Wassermann method and of the method recommended by the author (Noguchi's modification) are given with painstaking accuracy, and various phases of the tests are illustrated by ingenious diagrams that will serve to facilitate the comprehension of the tests by the uninitiated. The author does not permit himself to wander off into theoretical discussions. Even the surprising fact that various non-specific substances may take the part of antigen, quite as well as extracts of syphilitic liver, thereby upsetting to a degree the theoretical considerations on which the test is based, precipitates only the suggestion that these non-specific substances play an intermediating rôle between the real syphilis antigen and antibody present in syphilitic serum. The now well-established diagnostic value of the Wassermann reaction is shown by means of tabulations of the results obtained by various investigators. The last chapter is devoted to the author's butyric acid test for syphilis. There is an extensive bibliography and also a useful glossary of the terms commonly employed in discussions of immunity. The book fills a need and fills it well; it will be of great use to all who are interested in the serum diagnosis of syphilis.

MINOR OPHTHALMIC AND AURAL TECHNIQUE. By Alfred Nicholas Murray, M.D., Chicago, Assistant in the Department of Otology and Laryngology, Rush Medical College. Cloth. Pp. 233, with 98 illustrations. Price, $3.00. Chicago: Cleveland Press, 1909.

The author of this book is to be congratulated on the happy manner in which he has arranged, in so concise a form, the many elementary and useful hints on the eye and ear for the student in medicine. The great majority of practitioners have never had, and many students are not now getting, the training in ophthalmology and otology that they ought to get; consequently one must welcome every effort to help. We can scarcely forgive the author for using illustrations so poorly done as Figs, 8, 15, 19, etc., in this age of splendid art work, when semidiagrammatic illustrations would do so much better. The few words on anatomy and physiology could well be dispensed with, and a few references to works on the subject substituted. Although this work is classified as an elementary book, such diseases as gonorrheal ophthalmia and ophthalmia neonatorum are not given the attention which their importance demands. The treatment given is altogether too meager for any book whose pretensions are beyond those of a quiz compend. Two pages on eye-strain and ocular headaches is a decided slight to these distressing conditions, when six pages are devoted to an appendix on eye instruments. A reversal of this allowance would be more in keeping with what the reviewer takes to be the object of the volume. Diagram 65 is incomprehensible to any but an expert, and the illustrations of the malleus, incus and stapes are not what one has a right to expect when good ones can be had for the asking. No mention is made as to the use of the ophthalmoscope in general medicine, which is a very serious omission. The book, however, will be a useful help to the student and busy doctor, neither of whom have time nor perhaps the inclination to consult large works on these subjects.

Handbook of Diseases of the Ear. For the Use of Students and Practitioners. By Richard Lake, F.R.C.S., England, Surgeon, Diseases of Ear, etc., London School of Clinical Medicine. Third Edition. Cloth. Price, $2.75 net. Pp. 238, with 66 Illustrations. New York: William Wood & Company, 1910.

In the diagnosis, prognosis and treatment of diseases of the middle and internal ear and the mastoid a complete and accurate history of the patient is of greater importance, perhaps, than in diseases of almost any other anatomic structure or function. In this handbook, after giving a brief description of the more important anatomic points, Lake lays emphasis on the points to be brought out in the history-taking, and then describes special symptoms and their import, the bearing of nasal disease on aural disease and the function of hearing, gives in a clear manner the methods of testing the acuteness of hearing and describes the instruments used for this purpose and for the examination of the ear in general. The diseases of the ear and the possible intracranial complications are then described and the treatment indicated.

The descriptions of the different surgical procedures are given in a separate chapter, the different mastoid operations being especially well treated, as are the operative measures for the improvement of hearing in the chronic troubles, and the management of deaf-mutism. There is a chapter on otosclerosis and one on the influence of diseases of the middle ear on life insurance. The physician who expects to do operating in this difficult special field would of course consult larger works and gain experience in hospital, clinical and cadaver work. The book has an index, an appendix contains formulas for various solutions, powders, ointments, etc., to be used in ear diseases, numerous helpful illustrations, beside four colored plates showing numerous views of the tympanic membrane in various middle ear conditions.

A System of Clinical Medicine. Dealing with the Diagnosis, Prognosis and Treatment of Disease, for Students and Practitioners. By Thomas D. Savill, M.D., Physician to West End Hospital for Disease of Nervous System. Second edition revised by the author, assisted by Frederick S. Langmead, M.D., Casualty Physician to St. Mary's Hospital, and Agnes F. Savill, M.D., Casualty Physician to St. John's Hospital for Diseases of the Skin. Cloth. Price, $7. Pp. 963, with 172 illustrations. New York: Longmans, Green & Co., 1909.

The first edition of this book, in two volumes, was printed in 1903 and reviewed in The Journal at that time. This edtion is in one volume but contains about the same amount of material as the first. Since the two editions come so far apart, many changes were required by the rapid advances in medicine. The author has attempted to make these changes, but he admits that he has not given as much time to the revision as could be wished. In some respects the book shows this lack, as many articles no doubt might have been rewritten with advantage to eliminate dead timber and such designations as acute and chronic dyspepsia or gastritis, gastralgia, etc., terms which are still used, while calling attention to the more modern views in regard to gastric diseases. Treatment is given very brief space in most instances, consisting of the most general indications of what may be done. The chapter on nervous diseases is more complete and satisfactory than some others, which is accounted for, perhaps, by the fact that Dr. Savill gives especial attention to nervous diseases in his practice. Recent laboratory methods are sufficiently covered for a work of this kind. The original plan of the book is followed, subjects being approached from the view of symptomatology, symptoms then being traced to their causes, that is, the various diseases. The book is a useful and helpful one for the practitioner and the advanced student.

Urgent Surgery. By Félix Lejars, Professor Agrégé à la Faculté de Médecine de Paris. Translated from the Sixth French Edition by William S. Dickie, F.R.C.S. Cloth. Pp. 617, with 20 full-page plates and 994 illustrations. Vol. I. Price, $7 net. New York: William Wood & Co., 1910.

It is evidently the author's intention to divest surgery of the terrors it has for the average practitioner—but he is doing so at the expense of results. In the first place, by urgent surgery he does not mean emergency surgery—and to perform all the operations described in this book, years of practice and observation are necessary. Practically every condition for which surgical intervention is called for receives consideration here. The book is, therefore, really a text-book of surgery, written in a most readable style, avoiding all theoretical discussions, giving no bibliography, no description of new and untried methods—merely a discussion of the indications and the technical details. The advice given is good and no fault can be found with the methods described, but it is questionable whether the mere reading of a book will make the general practitioner—for whom it was written—sufficiently proficient to perform a gastro-enterostomy or a hysterectomy or a craniectomy or an esophagotomy.

Examination of the Urine. A Manual for Students and Practitioners. By G. A. DeSantos Saxe, M.D., Instructor in Genito-urinary Surgery, New York Post-Graduate Medical School and Hospital. Second edition. Cloth. Pp. 448, with illustrations. Price, $1.75 net. Philadelphia: W. B. Saunders Company, 1909.

This little manual is essentially technical and will be valuable to the practitioner in his daily routine. It not only tells what to do, but how to do it, and what the findings mean. The clinical aspect of uranalysis is emphasized. Many chapters have been practically rewritten and new subjects have been introduced, such as the pentoses, Cammidge's reaction, methods of preserving and staining urinary sediments, and preparing sediments for bacteriologic examination. New chapters have been added on urethral shreds, vesicular sago-bodies, diabetes, and toxemias of pregnancy, and a concise account of the modern methods of functional renal diagnosis has been incorporated. Plates of the Vogel and indican color scales are inserted in the book.

The Simple Carbohydrates and the Glucosides. By E. Frankland Armstrong, D.Sc., Associate of the City and Guilds of London Institute. Cloth. Price, $1.20. Pp. 112. New York: Longmans, Green and Co., 1910.

This is one of a series of monographs on biochemistry, edited by R. H. Aders Plimmer and F. G. Hopkins. It is intended to assist the student who wishes to make a thorough study of the carbohydrates and to whom much of the recent literature on the subject is not readily available. It presupposes an acquaintance with the elementary facts and would be difficult reading to one who is not thoroughly acquainted with the theories of modern physical and organic chemistry. The monograph will be of special value to the advanced student of physiologic chemistry and of physiology, but little of its material is at present utilizable by the medical practitioner.

Klinische Immunitätslehre und Serodiagnostik. Ein Lehrbuch für Aerzte. Von Dr. A. Wolff-Eisner. Paper. Price, 3.60 marks. Pp 186, with 5 illustrations. Jena: Verlag von Gustav Fischer, 1910

This book has its origin in lectures given by the author to physicians. It emphasizes the clinical and diagnostic importance of the facts of immunology and has but little to say about serum therapy and protective inoculation. Special emphasis is laid on the subject of hypersusceptiblity and on the clinical phenomena ascribed to this state. On the whole, the presentation is rather rough and fragmentary; and whether that is the best form by means of which to try to arouse the interest of "the busy practitioner" in the practical importance of the phenomena of immunity may well be doubted.

Handbook of the Diseases of the Nose and Throat. By Eugene S. Yonge, M.D., Physician to the Manchester Hospital for Consumption and Diseases of the Throat. Cloth. Pp. 407, with illustrations. Price, 9 shillings net. Edinburgh: William Green & Sons, 1909.

While the author of this book modestly states that it is intended solely for use in general practice, it is nevertheless a work of interest to the specialist also. The text is concisely written and conveys a fair working basis for the guidance of the general practitioner, though it is to be regretted that the descriptions of operations are not given in more detail. It is illustrated by 52 plates, most of which are excellent and add materially to the value of the text.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

NUMBER OF CRIMINALS, INSANE, ETC., IN INSTITUTIONS IN THE UNITED STATES

To the Editor:—Can you give an approximate estimate of the number of persons in reformatory, penal, idiocy and insane institutions in the United States?

J. H. Mackay, Norfolk, Neb.

Answer.—The above query was referred to the Director of the Bureau of the Census, Hon. E. D. Durand, who replies:

"According to the returns of a census of the insane and feeble-minded in institutions, there were in hospitals of the United States on Dec. 31, 1903, 150.151 insane patients, and during the year 1904 49,622 were admitted and 41.733 were discharged. On page 3 of the report it is stated that the statistics of paupers in almshouses for 1904 give 11,807 inmates as insane; and unquestionably a diligent search would have shown a larger number of insane persons who had not passed into the care of any institution. The figures for Dec. 31, 1903, and for those admitted during the year 1904 are for patients in public and private hospitals treating only the insane or having a separate department for the treatment of this class of patients. In institutions for the feeble-minded there were 14,347 patients on Dec. 31, 1903, and 2,599 were admitted during 1904, while 1,435 were discharged. The term 'discharged' includes those actually discharged and also those who died or were transferred to other institutions.

"Our report on prisoners and juvenile delinquents in institutions shows that there were 81,772 adults in penal institutions of the United States June 30, 1904. These included prisoners in U. S. civil prisons, state prisons and state and county penitentiaries, reformatories for adults, county and municipal jails, prisons and workhouses. Persons imprisoned for debt were not included. On the same date there were 23,034 juvenile delinquents in institutions.

"We shall be pleased to furnish your correspondent with our reports on 'The Insane and Feeble-minded in Institutions' and on 'Prisoners and Juvenile Delinquents in Institutions,' if he would like to have them, on receipt of his request."

The Public Service

Medical Department, U. S. Army

Changes for the week ended April 23, 1910:

Dawe, C. W., 1st lieut., M.R.C., April 14, left Ft. Thomas, Ky., en route to take station at Plattsburg Barracks, N. Y.

Snyder, Craig R., capt., April 14, left Ft. McHenry, Md., on two months' leave of absence.

Graham, George D., dental surgeon, April 14, reported for temporary duty at Ft. Omaha, Neb.

Hughes, Leonard S., M.R.C., granted an extension of leave for one month and ten days.

Birmingham, Henry P., 1st lieut. col.; Gandy, Charles M., lieut. col.; Keller, William L., major, to meet at West Point, N. Y., on May 24, 1910, or as soon thereafter as practicable to make physical examination of cadets.

Carter, Edward C., lieut. col.. died April 14, 1910, Army and Navy General Hospital, Hot Springs, Ark.

Sievers, Robert E., 1st lieut., M.R.C., on arrival at San Francisco, from the Philippine Islands, and completion of duty with the 23rd Infantry, will proceed to Ft. Warren, Mass., for duty.

Craig, Charles F., capt., ordered to Ft. Monroe, Va., for the purpose of investigating the water-supply at post, and on completion of this duty to return to his station in this city.

Pinkston, Omar W., capt., granted leave of absence for ten days.

Stark, Alexander N., major, granted leave of absence for fourteen days.

Michie, Henry C., M.R.C., granted leave of absence for two months, on surgeon's certificate of disability.

Koyle, Fred T., M.R.C., on arrival at San Francisco and completion of duty with 23rd Infantry, will proceed to Ft. Screven, Ga., for temporary duty, and on arrival of Major Roderic P. O'Connor, Medical Corps, is relieved from duty at Ft. Screven and authorized to avail himself of the leave of absence heretofore granted him.

Nichols, Henry J., capt., detailed to represent the Medical Department of the Army at the annual meeting of the American Society of Pathologists and Bacteriololsts, to be held in Washington, May 3 to 5, 1910.

King, Edgar, 1st lieut., the leave of absence heretofore granted him is extended fifteen days.

Hollingsworth, Robert M., dental surgeon, granted leave of absence for two months.

Medical Corps, U. S. Navy

Changes for the week ended April 23, 1910:

Holcomb, R. C., surgeon, detached from the *Solace* and ordered to the *Delaware*.

Dunbar, A. W., surgeon, ordered to duty at the Naval Dispensary, Washington, D. C.

Pugh, W. S., Jr., P. A. surgeon, detached from the *Tacoma* and ordered home to wait orders.

Baker, M. W., P. A. surgeon, detached from the *Nebraska* and ordered to the *Connecticut*.

Bishop, L. W., P. A. surgeon, detached from the navy yard, New York, and ordered to the *Tacoma*.

Old, E. H. H., P. A. surgeon, detached from the Naval Dispensary, Washington, D. C., and ordered to duty at the Naval Medical School Hospital, Washington, D. C.

Halloway, J. H., P. A. surgeon, detached from the *Connecticut* and ordered to the navy yard, New York.

Riddick, W. J., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *South Carolina*.

Phelps, J. R., asst.-surgeon, detached from the *South Carolina* and ordered to the *Solace*.

Wentworth, A. R., medical inspector, commissioned medical inspector, with the rank of commander, from Feb. 5, 1910.

Cecil, A. B., asst.-surgeon, detached from the *Wisconsin* and ordered to the *Nebraska*.

Geiger, A. J., P. A. surgeon, detached from duty at the Naval Hospital, navy yard, Mare Island, Cal., and ordered to duty at that yard.

Lumsden, C. P., medical inspector, detached from duty at the navy yard and Naval Hospital, Pensacola, Fla., and ordered to the naval recruiting station, Chattanooga, Tenn.

Fitts, H. B., medical inspector, ordered to the navy yard, Pensacola, Fla., and to additional duty at the Naval Hospital at that place.

Edgar, J. M., medical inspector, detached from duty on board the *Connecticut* as fleet surgeon of the Atlantic fleet and ordered to command the Naval Hospital, Boston.

McCormick, A. M. D., surgeon, detached from the *Michigan* and ordered to duty on board the *Connecticut* as fleet surgeon of the Atlantic fleet.

Snyder, J. J., surgeon, detached from the *Rhode Island* and ordered to the *Michigan*.

Rodman, S. S., surgeon, detached from the naval recruiting station, Chattanooga, Tenn., and ordered to the *Rhode Island*.

Benton, F. L., surgeon, detached from the *Buffalo* and ordered to the *Philadelphia*.

Ames, M. H., P. A. surgeon, detached from the navy yard, Portsmouth, N. H., and ordered to the Asiatic station.

Dorsey, B. H., P. A. surgeon, detached from the *Philadelphia* and ordered to continue other duties.

Foster, T. G., P. A. surgeon, detached from the *Buffalo* and ordered to duty at the Naval Hospital, Mare Island, Cal.

Minter, J. M., P. A. surgeon, detached from the first provisional of marines, expeditionary forces, and ordered to continue other duties.

French, G. R. W., asst.-surgeon, detached from the Naval Hospital, Mare Island, Cal., and ordered to the *Albatross*.

Lee, A. E., asst.-surgeon, detached from the *Albatross* and ordered to duty at the Naval Hospital, Mare Island, Cal.

Huff, E. P., asst.-surgeon, detached from the *Villalobos* and ordered to the *Charleston*.

Noble, D. H., asst.-surgeon, detached from the *Charleston* and ordered to the *Villalobos*.

Public Health and Marine-Hospital Service

Changes for the week ended April 20, 1910:

Carter, H. R., surgeon, granted 3 days' leave of absence from April 14, 1910.

Anderson, John F., P. A. surgeon, granted 3 days' leave of absence from April 18, 1910, under Paragraph 189, Service Regulations.

Lloyd, B. J., P. A. surgeon, granted 7 days' leave of absence from April 13, 1910.

Creel, R. H., P. A. surgeon, relieved from duty at Evansville, Ind., and directed to proceed to Seattle, Wash., and report to the commanding officer, Revenue Cutter *Tahoma*, for duty.

Collins, G. L., P. A. surgeon, leave of absence for 1 month from April 14, 1910, amended to read 1 month from April 21, 1910.

Spratt, R. D., P. A. surgeon, granted 1 day's leave of absence, April 5, 1910, on account of sickness.

Frost, W. H., P. A. surgeon, granted 1 day's leave of absence, April 16, 1910, under Paragraph 191, Service Regulations.

Ashford, F. A., P. A. surgeon, granted 15 days' leave of absence from May 7, 1910.

Hotchkiss, S. C., asst.-surgeon, bureau order of March 5, 1910, to proceed to Honolulu, Hawaii, revoked. Directed to report to the commanding officer, Revenue Cutter *Bear* for duty.

Turnipseed, D. C., asst.-surgeon, relieved from duty at Baltimore and directed to proceed to San Francisco and report to the commanding officer, Revenue Cutter *Perry* for duty.

Bailey, C. A., acting asst.-surgeon, granted 6 days' leave of absence from April 12, 1910.

Bingham, E. O., acting asst.-surgeon, granted 15 days' leave of absence from May 6, 1910.

Hollman, H. T., acting asst.-surgeon, granted 2 days' leave of absence from March 31, 1910, under Paragraph 210, Service Regulations.

Hume, Lea, acting asst.-surgeon, granted 10 days' leave of absence from April 12, 1910.

Lawhorn, C. C., acting asst.-surgeon, granted 25 days' extension of leave from March 12, 1910, on account of sickness.

Townsend, W., acting asst.-surgeon, granted 7 days' leave of absence from April 14, 1910.

Walker, R. T., acting asst.-surgeon, granted 18 days' leave of absence from April 25, 1910.

Watkins, McD., acting asst.-surgeon, granted 2 days' leave of absence from April 13, 1910.

Wright, F. T., acting asst.-surgeon, granted 15 days' extension of leave from March 18, 1910, on account of sickness.

Boards of medical officers were convened to meet on April 25, 1910, for the purpose of making physical examinations of officers of the Revenue-Cutter Service as follows:

San Francisco: Surgeon James M. Gassaway, chairman; P. A. Surgeon R. E. Ebersole, recorder.

Portland, Me.: Surgeon C. E. Banks, chairman; Acting Asst. Surgeon A. F. Stuart, recorder.

Wilmington, N. C.: Surgeon C. H. Gardner, chairman; Acting Asst.-Surgeon W. D. MacMillan, recorder.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Many Organizations of Physicians and Laymen and Many Newspapers Endorse Department of Health

During the past week the following county medical societies and other organizations have adopted resolutions endorsing the Owen bill: Fourth District Medical Society of South Dakota; Washington County, Arkansas; Washington County, Tennessee; Montgomery County, Arkansas; Alameda County, California; King County, Washington; LaClede County, Missouri; Tolland County, Connecticut; Jefferson County, Iowa; Sebastian County, Arkansas; Montcalm County, Michigan; Clinton County, Missouri; Blue Earth County, Minnesota; Columbus, Ohio, Academy of Medicine; Knox County, Kentucky; Fannin County, Texas; Jackson County, Missouri; Dawson County, Montana; Lincoln County Nebraska; Sequoyah County, Oklahoma; Hampden District, Massachusetts; Marion County, Missouri; McLean County, Kentucky; McCracken County, Kentucky; Henry County, Indiana; Wayne County, Michigan; the Hannibal Commercial Club of Hannibal, Mo.; Chamber of Commerce of Duncan, Okla.; Woodward Commercial Club, Woodward, Okla.; Board of Education, Paducah, Ky.; Protestant Ministerial Association, Paducah, Ky.; General City Council, Paducah, Ky.; Hobart Chamber of Commerce, Hobart, Okla.; Mayor and City Council, Sweetwater, Tex.; Health League, Lorain, O.; Board of Health, Ft. Smith, Ark.; Muscatine Commercial Club, Muscatine, Ia.; Tuscaloosa Board of Trade, Tuscaloosa, Ala.; Chamber of Commerce, Seattle, Wash.; Commercial Club, North Platte, Neb.; and the Glendive Commercial Club of Glendive, Mont.

Many petitions containing the signatures of prominent business men, politicians and influential citizens have also been sent to the members of Congress.

The following are some newspaper comments:

The Flint, Mich., *Daily Journal* says editorially, "Possibly in no branch of the public service is there a greater need for uniform laws and better interstate relationship than in the supervision of public health. . . . Remarkable strides have been made during the past ten years owing to a better public appreciation of the tremendous danger which results from neglect in this regard. Out of this campaign of education, which has been carried on by physicians and the press, has come an insistent and we believe, an intelligent demand for federal supervision of our health departments. The urgent need of such a department or bureau is quite generally appreciated. We need a central office, the sole functions of which shall be the safeguarding of public health by means of scientifically searching inquiries and the adoption of preventive remedies and measures."

The New York *Press* said, editorially: "It is worth while to note that the bill to create a national department of health, with a cabinet officer at its head, was introduced into the Senate by Senator Owen, of Oklahoma, a southern Democrat, and early in life under the influence of the tradition that national activities should not be extended. But like other men, he perceives that what the nation can only do or can better do it should do and on the health matter he does not hesitate to declare himself a nationalist. Disease is spread through the pollution of interstate streams. It is conveyed through a lack of sanitary regulation in relation to interstate commerce. Pestilence comes in from abroad and there is need of common regulations. A central organization of dignity and importance will have a most potent influence on the health departments of states and cities that will seek its advice and cooperation. It will be a force for uniform legislation and uniform administration. Its effect, in this regard, will be comparable to that of the Department of Agriculture in the agricultural field, a department whose indirect work is quite as valuable as the direct. . . . There are approximately three million people in this country prostrate from preventable disease. The tax on industry therefrom is greater than the entire burden of government. Here is an interest certainly broad enough to justify national activity and to abate in some measure the prejudice that exists against the creation of new governmental departments and the enlargement of the cabinet. . . . It can hardly be doubted that if there was a minister of public health, and [if] hygiene was thus nationally recognized, there would be a great stimulus everywhere to the warfare against disease."

The Minneapolis *News* said, editorially, April 12: "Minneapolis has joined a national movement to secure proper governmental conservation of the public health. . . . The government maintains no well organized, centralized and efficient department for coping with the subject of public health. There are various agencies but they are scattered and subordinated. . . . The movement for a federal department of public health is now well under way and the sooner it is demanded by the people at large, as well as by physicians, the sooner it will be realized."

The Beaver Falls, Pa., *Tribune* says, editorially: "The introduction by Senator Owen of a bill calling for the establishment of a federal department of health under the secretary of health, who shall be a member of the cabinet, is the entering wedge in a campaign that should be prosecuted vigorously until the desired end has been attained. . . . That congress has not acted along this line heretofore is believed to be due to an impression that there was no great public demand for such action. But public sentiment has changed in recent years. The people are waking up to the need of health conservation and members of congress are being urged to exercise their influence for the much desired reform. The people of the United States should have a department of health and the present session of congress should not adjourn until the necessary legislation has been enacted."

The Denver *Post* says, editorially: "Senator Owen, of Oklahoma, has introduced a bill providing for the organization of a department of health, which would rank equally with the already existing departments. The national platforms of the Republican and Democratic parties both endorsed the creation of some such machine of public hygiene. President Taft has given the proposal his approval. But the Owen bill is not an administration measure. It will certainly meet with opposition from many quarters. You can help it not a little by writing to your representatives, and the senators, saying a word in its favor. A department of health must be created sooner or later and the sooner the better."

Other Department of Health Bills

Hon. Charles E. Creager of Oklahoma introduced into the House of Representatives, April 15, the same bill as that introduced into the Senate by Senator Owen of Oklahoma, providing for a Department of Public Health with a Secretary of Public Health in the Cabinet.

Hon. James S. Simmons of New York introduced, April 22, a bill (H. R. 24827) to establish a Department of Public Health. Mr. Simmons' bill, while drawn along much the same lines as that of Senator Owen, contains a number of points of difference. Section 1 provides for a Commissioner of Public Health with a salary of $7,500 instead of for a Secretary of Public Health who shall be a Cabinet officer. Section 2 of the Simmons' bill provides for a Director-General and subordinates instead of for assistant secretaries, while Section 3 is practically the same as the same section in the Owen bill except that the regulation of animal diseases, which in the Owen bill was made a part of the duties of the Department of Health, is omitted in the Simmons' bill. Section 5 of the Simmons bill is practically a condensation of Sections 6, 7, 8 and 9 of the Owen bill. This section reads as follows:

Section 5.—That it shall be the duty and province of the Department of Public Health to supervise all matters within the control of the Federal Government relating to the public health transferred by or under this Act to such department. It shall gather data concerning all matters relating to the public health, establish chemical, biologic and other standards necessary to the efficient administration of that department, impose and enforce federal quarantine regulations, and give due publicity to all matters necessary to the protection and preservation of the public health which are strictly within the constitutional obligations of the United States, cooperating, so far as practicable, with the health authorities of the several states of the Union. It shall be the duty of the Commissioner of Public Health, on proper requisition, to provide any medical, sanitary or other health service required by another department of the Government, and all departments, except the Department of War and the Department of the Navy, requiring medical, surgical, sanitary, or other similar services shall apply to the Commissioner of Public Health therefor wherever it is practicable.

County Secretaries Conferences

The custom of holding an annual conference of the county secretaries and executive officers of the state organization, either in connection with the annual session of the state association or at some time during the winter, is becoming more common and is deserving of encouragement. The success of an organization depends on the executive ability of the officers in charge of the society work; of these the county secretary is by far the most important. Anything, therefore, which can be done to increase his efficiency or to lighten his labors is deserving of encouragement.

In a number of states, particularly Pennsylvania, Ohio, Illinois, Iowa, Missouri and Michigan, these conferences have become established features of society work, having been held consecutively in some states for several years. A number of other states are arranging to hold such conferences in connection with their approaching meetings.

MICHIGAN

The annual conference of the county secretaries of the Michigan State Medical Society was held in Detroit on January 13. The proceedings appear in the *Journal of the Michigan State Medical Society* for April.

Dr. A. E. Bulson, Jackson, Mich., councilor of the second district, spoke on "Medical Organization Work," emphasizing the importance of the county society which, he said, "must be a living torch in the community, in the front rank fighting superstition and ignorance, ever ready to uphold the honor and dignity of the profession, and the betterment of society. The accomplishment of these results calls for the cooperation of every member. The secretary may direct the work but he must have the support of the entire membership."

Dr. W. T. Dodge, chairman of the council, spoke on "The Councilor's Relation to the County Society," advising the councilors to make themselves thoroughly familiar with conditions in their districts but not to interfere in county society affairs needlessly and especially not to assume a dictatorial attitude.

Dr. Archie MacKinnon, secretary of the O. M. C. O. R. O. Medical Society (a society covering six counties), of Lewiston, discussed "The Business Affairs of the County Secretary."

"Postgraduate Work" was discussed by Dr. Wilfrid Haughey, the new secretary of the state society, who gave the experience of the Calhoun County Medical Society with postgraduate work. In this county there are three cities, two of them being twenty-six miles apart. Accordingly, a postgraduate class was organized in each city. For the first year the society outlined its own course of study. The second year the Battle Creek Medical Club was organized as a branch of the Calhoun County Medical Society, and the postgraduate course recommended by the American Medical Association was adopted. This has since been followed with much success.

Dr. Frank C. Kinsey, of Three Rivers, spoke on "Ethical Problems of the County Secretary," discussing advertising, eligibility to membership in county societies, the mistakes of young practitioners and other ethical problems which come before the county organization.

Dr. V. A. Chapman, of Muskegon, described the plan followed in the Muskegon-Oceana County Society. In making up the program the names of members are taken in alphabetical order and each member is made responsible for a certain meeting for which he writes and reads a paper, and supplies such entertainment for the society as he wishes. If he desires, he may invite a member of the profession from outside the local membership to take his place.

Dr. B. R. Schenck, the retiring secretary, spoke on "The Relation of the County Society to the State Society," emphasizing the importance of a uniformity of membership requirements and of simplicity in membership requirements.

IOWA

The third annual conference of the council, presidents and secretaries of county medical societies was held at Des Moines, January 25, the proceedings appearing in the *Iowa Medical Journal*, for March.

Dr. J. F. Herrick, of Ottawa, discussed programs, emphasizing the importance of following a definite system of study in arranging programs so that the county society might be a real postgraduate school to its members.

Dr. J. W. Kime, of Fort Dodge, discussed the systematic campaign against tuberculosis now being carried on in Iowa by the State Board of Control, the Iowa State Medical Society, the State Board of Health and the State Laboratory, urging the appropriation of a certain fund by the state to carry on this work.

Dr. Henry G. Langworthy, of Dubuque, secretary of the Dubuque County Medical Society, discussed the advisability of county societies establishing business bureaus for the collection of bills, etc., outlining the plan adopted by his county society which has proved successful.

A local attorney was designated as the representative of the members of the society to conduct the business bureau. He calls on members every three months for a statement of accounts. He also keeps a separate file of each physician's accounts and correspondence, making quarterly returns directly to him. No suits are brought on accounts without authorization from the physician. Each physician's account is open to his inspection at any time but to no one else. Commissions are paid the attorney for all accounts which he collects or for amounts paid to physicians on accounts which are in his hands. All accounts in the hands of the attorney are at any time open to the audit of the committee of the county society. Commissions are paid to the attorney ranging from 50 per cent. on collections of 2 dollars or under, to 20 per cent. on collections over 10 dollars, the expenditures of conducting the office being borne by the attorney.

Dr. J. C. Cooper, Villisca, president of the Montgomery County Medical Society, spoke on "What I Want or Expect of My County Society," urging regular meetings, systematic work and development of the social side of the county organization.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—Third Weekly Meeting

Diseases of the Larynx

Acute Laryngitis: Diagnosis, treatment.

Subacute Laryngitis.

Chronic Laryngitis: Diagnosis, treatment.

Laryngitis Sicca.

Edematous Laryngitis: Etiology, treatment.

Acute Infectious Diseases of the Upper Air Passages: Influenza, diphtheria, erysipelas. Pathologic changes in upper air passages due to scarlet fever, measles, variola, rubella, typhoid, malaria, etc.

Chronic Infectious Diseases of the Upper Air Passages: Syphilis, symptoms of primary, secondary and tertiary stages. Lesions in nose, in pharynx, in larynx. Hereditary syphilis, symptoms, diagnosis. Tuberculosis, diagnosis in nasal, in laryngeal tuberculosis. Lupus.

Neoplasms of the Upper Air Passages: Benign tumors found in nose, in pharynx, in larynx. Malignant tumors in nose, in pharynx, in larynx.

Society Proceedings

COMING MEETINGS

Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological D. C., May 3-5.
American Gynecological Sc , May 3-5.
American I D. C., May 3-5.
Amer. Medi Washington, D. C., May 3-5.
American ashington, D. C., May 3-5.
American ashington, D. C., May 3-4.
American Orthopedic Association, ington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Association of American Physicians, Washington, D. C., May 3-5.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Assn., Hunter's Hot Springs, May 11.
National Association for Study of Epilepsy, Baltimore, May 7.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
Rhode Island Medical Society, Providence, May 31.
Texas, State Medical Association of, Dallas, May 10-12.

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy-seventh Annual Meeting, held at Memphis, April 12-14, 1910

(Continued from page 1400)

Discussion on Prostatic Hypertrophy

Dr. S. R. Miller, Knoxville: I have had the same experience that the specialist has, and that is the operative treatment of prostatic hypertrophy is as a rule very satisfactory, while the palliative treatment is extremely unsatisfactory. In all the cases that I can recall there was decided enlargement of the prostate and the patients submitted to operation, the results being very satisfactory. I have tried massage in prostatic hypertrophy, but have not had good results from it.

Dr. J. A. Crisler, Memphis: I have been particularly interested in Dr. Lewis' statement concerning the examination of the prostate and the conditions in the bladder prior to operation in these obstructive cases. I think we should speak of this condition as an obstructive prostate and not merely as an enlarged prostate; many of the enlarged prostates do not cause obstruction. In the cases I have had under observation, probably less than 40 in number, I have been unable in most of them to pass any kind of instrument into the bladder. These patients have been referred to me after the enlargement of the prostate had become very advanced, and when there was no possible way for the physician in charge to draw off the urine. All of us must agree with Dr. Lewis that we ought to make a careful diagnosis and a careful examination of the patient prior to operation, and when it is borne in mind that a large percentage of these cases occur in men over 60 and 70 years of age, a number of them having bad hearts, having some albumin and casts in the urine, and the urine being ammoniacal, an operation should not be undertaken until careful examination has been made to determine the condition of the various organs.

Dr. John L. Jelks, Memphis: One phase of this subject has not been touched on, which I think worthy of consideration. Some years ago, I called attention to a sacculated condition of the anterior wall of the rectum in many cases of prostatic enlargement and irritability. In a number of these cases in old men with prostatic enlargement, there is a hemorrhoidal tumor or a marked vascular pathology and sacculated condition in the anterior quadrant of the rectum. In these cases, I have resorted to anterior proctotomy which consisted of touching up the anterior wall of the rectum, which was sacculated, and producing a similar effect on the male bladder as would be produced on the female bladder by anterior colporrhaphy.

Dr. E. H. Martin, Hot Springs, Ark.: In discussing chronic prostatitis Dr. Livermore mentioned some cases in which the patients complained of pains in the legs. I do not think he went far enough in this regard. I think the disease which we ordinarily know as chronic gonorrheal rheumatism is due to prostatic disease. In many of these cases the prostate is entirely overlooked when the man consults a physician with a characteristic history of pains in the bottom of his feet, pains running down the legs and involvement of some extremity.

Dr. Richard A. Barr, Nashville: I was glad to hear Dr. Lewis emphasize prostatic obstruction as contrasted with prostatic hypertrophy. In a few patients I have treated there was marked prostatic obstruction without any hypertrophy. While I have not had any experience with cancer of the prostate, I have seen the mistake made of operating for cancer of the prostate when simple hypertrophy existed.

Dr. J. W. Handly, Nashville: In the incontinence which follows the operation for prostatic hypertrophy or obstruction, my experience and observation do not corroborate the beautiful results which have been depicted in connection with these cases. I have seen a number of cases of prostatic obstruction and prostatic hypertrophy, and many of those I have seen have been followed by incontinence that lasted sometimes 3 or 4 or even 5 or 6 months, necessitating the wearing of a rubber urinal. I do not like to see the statement made that when we remove the prostate such a patient, at the end of 30 days or more, is able to pass urine in the normal way. I think that few patients do.

Clinical Significance of Silent Fluids in the Thoracic Cavity

Dr. Frank A. Jones, Memphis: During 12 years' experience at a large out-clinic, with 7 years' service in hospital work, I have been impressed with the fact that these fluids are frequently not recognized, especially when critical physical examination of the chest has not been made. These silent fluids may be serous, serofibrinous, purulent, or hemorrhagic. They may come on acutely or chronically. They are most frequently complications and sequelæ of acute or chronic renal lesions or of pulmonary and abdominal tuberculosis. In the out-clinic service, syphilis is often complicated with a tuberculous process. Cardiac lesions of whatever nature giving rise to failing compensation in the production of hydrothorax in my experience are always active and the physical findings are distinctive and typical. In tuberculous peritonitis with effusion when the process has not been active in the pulmonary tree, I have found in most instances bilateral pleurisy with effusion, latent in nature. In these cases, there are no circulatory or respiratory disturbances that would direct attention to its presence. The patient has neither dyspnea, cyanosis, cough, bulging of intercostal spaces, nor fixation of the chest walls. In chronic interstitial nephritis with its concomitant cardiovascular degeneration in men past middle life, silent hydrothorax is often overlooked. In my clinical experience the withdrawal of these silent tubercular effusions, when the temperature remains near normal, and when the constitutional disturbances are not marked, converts this latent picture into a volcanic panorama. The patient rapidly declines by the acute pneumonic phthisis route. On the other hand, when the fluid is silent and systemic infection active, free incision to promote drainage is clearly indicated. Those silent fluids as the result of inflammatory action not giving rise to symptoms can be explained on the ground of their gradual development.

Amebiasis, Complicated in One Instance by Pellagra; in Other by Eighteen Adenomata

Dr. John L. Jelks, Memphis: For several years I have observed skin manifestations of amebic infection and ulceration in the large intestine, but I made my first report in April, 1909, at the DeSoto County (Mississippi) Medical Society, and again in May, 1909, at the Arkansas State Medical Society. These lesions are either severally or successively erythematous, papular, pustular and edematous. They improve under treatment directed to intestinal infection and ulcerations. In one case, diagnosed by able clinicians and skin specialists as pellagra, the *Amœba hystolytica* was observed in the mucopurulent material taken from the rectum. In another case I observed eighteen adenomata in the rectum and sigmoid, complicating amebiasis. This is the second case in which I have observed adenomata. In the other case only nine tumors were found.

DISCUSSION

Dr. George Dock, New Orleans: This paper is especially interesting to me because I have been working with cases of dysentery and with pellagra for some time, and I have not been fortunate in seeing the combination, all the more disappointing in this respect. I early predicted that amebiasis would probably be a predisposing cause of pellagra, but my experience with the two diseases runs somewhat this way. We have had about 35 cases of distinct pellagra in New Orleans in the last season and all of these patients have had the stools examined and in many proctoscopic examinations were made. These patients were examined critically, because at the pellagra conference held last autumn one of the speakers stated that he found amebas in all cases of pellagra in the stools. Although New Orleans is a somewhat rich field for amebiasis we have not found the combination of amebiasis and pellagra to occur in a single case.

Dr. Louis Leroy, Memphis: I have been interested in the relationship between amebiasis and pellagra, and was very much pleased to hear the view which Dr. Dock expressed as to the almost certain parasitic causation of pellagra because that is in accord with the views which have been forced on me for some time in considering this disease. There is no doubt that amebas are frequently associated with pellagra, almost too frequently to be looked on as a coincidence. Still I believe we are not ready to decide on an etiologic relationship between the two, because we see in this locality a large number of cases of amebic infection and a relatively small number of cases of pellagra, in which the two are associated. Again, there are many cases of pellagra in which amebas are not found.

Dr. Marcus Haas, Memphis: My experience has been limited to about twenty cases of pellagra, and I am not willing to say that these cases were true pellagra, without going into the etiology of the disease. This manner of shooting up into the air as to the causative agent of pellagra does not help us, and will only muddle us. As to its relation to amebiasis I am not willing to agree to that at all. I believe we may have amebiasis and pellagra combined, but think it is simply a coincidence and that as a rule one disease has no relation to the other.

Dr. William Krauss, Memphis: I have seen a few cases of pellagra and my observations, careful as they have been, can add nothing to what has been said in the literature on this subject. There is some confusion, however, with reference to the seat of the lesions and the portals of entry. I am willing to admit that the intestinal tract is probably the portal of entry, or one of them; but so far as the symptoms are concerned the lesions we find post-mortem are a consequence, probably, of changes in the nervous system, and are not primarily due to the conditions of the gastrointestinal tract. I recall one patient who had hookworm disease, and subsequently developed pellagra, who died about six weeks after he was first brought under observation as a pellagrin, and in whom the entire intestinal tract showed no evidences of such a lesion as one would find in uncinariasis nor were any worms found at the post-mortem examination. There was a roughened-beard appearance of Peyer's patches, and a marked hyperemia of the entire intestinal wall, but that was all.

Dr. G. C. Savage, Nashville: At the New Orleans meeting of the Southern Medical Association the newspapers misrepresented my position in regard to what I said concerning pellagra. What I really did say was that I would just as soon believe that pellagra is a kind of leprosy as to believe it is caused by corn, but I do not believe either one.

Dr. Newton Evans, Nashville: It might be well in connection with Dr. Jelks' paper to report an observation which I made on some pellagrins in Nashville. Thirteen children are segregated for pellagra. I made examination of the feces of these thirteen children and in 5 of them found they had uncinariasis. I do not think this observation would have an influence in making us believe one disease is the cause of the other, and I believe that any number of children of the same class would probably give the same percentage of hookworm infection.

Dr. E. H. Martin, Hot Springs, Ark.: It has been intimated from Nashville that pellagra is a contagious disease. From a perusal of the literature of the subject it seems to be non-contagious, and the fact that observation of its contagiousness has been made in Nashville ought not to warrant us in going on record as believing the disease is contagious. The contagion theory of pellagra does not appeal to me.

Dr. William Litterer, Nashville: I think that pellagra is a separate and distinct disease, although it may be associated with other conditions, as Dr. Krauss has said. I made a post-mortem examination on a case of pellagra, in which I found almost identically the conditions described by Dr. Krauss. I have found, also, later in my work, something like seven months afterward, several hookworms in the intestinal tract.

Dr. J. D. Hopper, Jackson: I have read a good deal on pellagra since it has been brought before the medical profession, and with all due respect to the remarks of those who have spoken, I do not think we know anything about it. The Italians claim that it is maize or corn which produces the disease. As Americans it behooves us as physicians to disapprove the maize theory, because the corn in America is one of the resources of this country, from a financial standpoint. I do not think we ought to speak of corn as the cause of pellagra until that theory is absolutely proved.

Symptoms and Effects of Adenoids

Dr. W. L. Simpson, Memphis: The symptoms and effects of adenoids are not seriously enough considered. It is not necessary to wait until all the cardinal symptoms of adenoids are present before a child is given relief. It reflects on the physician when a child or infant becomes anemic, rachitic, or has ear complications, recurrent attacks of croup, or has the adenoid facies, etc., if these conditions are due to the adenoid vegetation. Particular attention should be paid to children who are not up to the standard in the school. It is always possible to tell by means of a trained finger whether adenoids are present or not.

DISCUSSION

Dr. G. C. Savage, Nashville: The condition described is not fully realized by a large number of the profession. In Europe this condition is fully appreciated, and that appreciation has taken the form of the erection of a monument to Meyer, who discovered the condition. I know of nothing in childhood that demands treatment more than the removal of adenoid tissue in the vault of the pharynx. Dr. Simpson stated that the presence of adenoids is responsible for inflammation of the middle ear. That is absolutely true, and the statement cannot be made too emphatic. But when the ear is inflamed an operation ought not to be done. The acute condition of the middle ear should be allowed to pass away before the removal of the adenoids is undertaken.

Dr. T. J. Herron, Jackson: A woman consulted me recently suffering from a severe cold. She had tympanitis and a frontal sinus abscess. She was 22 years old, and was not a mouth-breather, so far as I could determine. I began to treat the symptoms, and the frontal sinus abscess, and on examination I found she had adenoid tissue, which I removed, thereby giving great relief.

Dr. W. L. Simpson: One thing we should always remember is never to treat a running ear until we find whether the patient has adenoids or not.

Trifacial Neuralgia Treated by Alcohol Injections

Dr. W. D. Swink, Milan: The number of injections required for the relief of pain vary from 2 to 16, and relief or cure lasts from 4 months to 3 years. Cures are more quickly realized in those patients who have not undergone surgical operations, although relief has been secured from alcoholic injections when gasserectomy and the Abbe operations have failed. The freedom from pain after injections is not so long, perhaps, as from peripheral surgical operations, but reinjections can be so easily done that palliative relief can be obtained, if not, as some operators believe, a permanent cure. When these patients fail to get relief from alcohol injections, and the advocates of this treatment believe that there are very few cases of failure if the alcohol reaches the nerves, they should not by any means be made morphin habitués, as so many of them are, but should have the intracranial operation, as advised by Spiller. This consists in division of the sensory root of the Gasserian ganglion, as performed by Frazier, Kocher and Cushing; it is less hazardous and more complete than total extirpation of the ganglion.

DISCUSSION

Dr. W. T. Black, Memphis: My experience in the treatment of trifacial neuralgia has been limited. One can readily see how deep injections of alcohol or of osmic acid would be objectionable. I think the measurements would have to be very accurately made when injecting around the great wing of the sphenoid bone. I do not see why we may not injure, in some cases, the middle meningeal artery or the small meningeal nerve which goes through the forearm ovale, and I do not see why we may not puncture some of the veins going through the foramen of Vesalius if we are not careful in measurements. The relief from these injections is only temporary. In cases in which the supraorbital nerve is involved a cutting operation is more permanent.

Dr. Duncan Eve, Jr., Nashville: My experience is limited to 5 patients with trifacial neuralgia in whom deep injections of alcohol were used; of this number I have cured 2. One patient, who has gone on for 14 months without recurrence, received osmic acid and a portion of the nerve was resected. Another patient has gone 3 months without a recurrence of the pain. One case was a complete failure. In making the injections I use the needle of Patrick. I use a dull needle instead of a sharp one, as it reduces the amount of hemorrhage.

President's Address: The Higher Mission of the Physician

Dr. Jere L. Crook, Jackson: Health is the most valuable and most sought-after individual possession and the health of its people is the nation's greatest asset. Yet how tardily is the national conscience awakening to this stupendous fact. It is our duty and our task to teach the people this great truth, and to impress it so forcibly that legislators will be aroused to a full sense of their responsibility and give the medical profession the power in the national government which its purposes, achievements and importance demand. If convincing, tangible proof of the wisdom of this step be needed it surely can be found in the marvelous results of the sanitary campaign in Panama, under the efficient control of Dr. Gorgas. No well-informed citizen will deny that the success attending America's efforts in digging the great canal is due to the work of the sanitary corps. Modern medical science alone is responsible for our success where France failed. She had both men and money, but she had not learned how to keep her men alive and well. Dying men cannot dig a ditch or build a dam. An unfaltering faith in the mosquito theory of the causation of the tropical fevers, and an unwavering persevering persistence in the measures necessary to exterminate the cause, together with other approved, modern sanitary precautions, has converted the canal zone into a healthful, pleasant place of abode with a death-rate no greater than many cities of the United States. The canal work goes swiftly forward and presenting no insolvable engineering problems, with money and men in abundance, and the prestige of this great nation behind it, probably within five years the world will witness the wedding of the oceans and the commerce of Occident and Orient will pass through this wonderful waterway. Such a realization of the dream of the centuries could never have seemed so near but for the glorious work of the medical profession, the sacrifices of some of its noble sons—Carroll, Reed and Lazear—and the effect which a knowledge of these modern discoveries has produced on the legislative and executive branches of our government. No more brilliant and decisive example of the economic and humanitarian value of our profession could be desired. The result was attained by the members of the profession, teaching the people the truth and meaning of the mosquito theory of disease. It should be easy to induce legislators to recognize the practical value of these teaching campaigns. Our own state and many others are now sending out lecturers on fruit-growing and stock raising and building experiment stations to teach the farmers soil treatment and conservation. Surely it is reasonable and practical for an awakened public to demand that the states constantly maintain in the field a corps of medical lecturers to teach the conservation of human lives, by instructing the people how to avoid and detect disease.

Symposium on Uncinariasis

Following the president's address there was a symposium on hookworm disease.

Dr. Charles W. Stiles, Washington, D. C., spoke of the discovery of the hookworm, the distribution of the disease and its consequences, his remarks being illustrated by numerous stereopticon slides.

Dr. George Dock, New Orleans, discussed the symptomatology and diagnosis of hookworm disease; Dr. Louis Leroy, Memphis, the clinical manifestations: Dr. G. Newton Evans, Nashville, the pathology and report of work along this line; Dr. William Litterer, Nashville, spoke of hookworm dissection, with reference to the non-oviparous female.

Manic-Depressive Insanity

Dr. John W. Stevens, Nashville, after defining this disease, discussed the etiology, pathology, symptomatology, diagnosis and treatment. Regarding treatment he said:

Treatment should very rarely be undertaken outside an institution, the danger of suicide or injury of relatives, in response to delusions in the depressed state, and the restlessness and noisiness of the maniacal patient being too great to permit it. Because of the increased sexual excitement present in the mildly maniacal woman, the closest supervision is necessary. In the treatment of the maniacal forms the indications are to control the excessive activity and talkativeness. This is best accomplished by rest in bed, the removal of all distracting influences and the exercise of kind but firm authority. If the restlessness and talkativeness be not restrained the patient thereby increases his own excitement. The ideal method of treating an excited maniacal patient is to isolate him completely from all other patients in a quiet room, with only a single nurse, who must be possessed of such personality as to enable him to exercise authority and control of this particular individual. The patient should be made to remain in bed and his restlessness and talkativeness checked so far as possible. Every idea to which he gives expression simply serves to call up another to his mind, for which there is an equal desire for expression. When it is not always practicable to thus isolate the patient with a special nurse, the same idea should be carried out with such modifications as the circumstances demand. At times it will be necessary to resort to sedative measures. Excellent results follow the use of the hot or cold pack, or the prolonged warm bath. Sulphonal, trional, chloral and the bromids are safe and effective sedatives for these patients. They should be kept in bed until the tendency to over-activity and talkativeness has in a large degree disappeared, and after being allowed up excitement and irritation should be avoided. In the milder types of mania it is frequently a good idea to confine the patient in bed for a period, in order to get control of him. In the care of the depressed cases there are no particular points to be borne in mind except those with which we are all familiar in the care of such patients. The danger of suicide must always be borne in mind and the patient watched accordingly. The occurrence of physical symptoms and indications for treatment must be met, as in other diseases, the same principle governing us.

Treatment of Salpingitis

Dr. J. Hugh Carter, Memphis: In cases of salpingitis we should get a complete history. A careful examination should be made and great care exercised in making the diagnosis. There should be thorough medical and hygienic treatment of the acute form of the disease. In the suppurative form of the disease operation should be done at once, or as soon as the inflammation has subsided, by the abdominal route.

DISCUSSION

Dr. W. T. Black, Memphis: In the beginning of these cases strictly medical treatment should be given. The principal thing about salpingitis is to know how to treat the patient, whether to operate or to wait. Undoubtedly, in the acute cases we should not operate until the patient has passed over the acute illness. If the salpingitis is due to streptococcus infection, the abscess opening down in the broad ligament or in the pelvis, I think that drainage through the vagina will be of great benefit. It is true that sometimes these patients recover without operation, or at least become symptomatically well.

Dr. L. E. Burch, Nashville: The direct cause of salpingitis is infection. There are many predisposing causes, and it is impossible to differentiate salpingitis from oöphoritis, endometritis, and peritonitis, that is, eliminating a tuberculous condition. A patient with salpingitis usually gives this history: She has been perfectly well. She is delivered of a child, and in the course of time trouble develops. On the other hand, she may have had suspicious intercourse, and trouble develops. Salpingitis, in other words, is an ascending infection, which first involves the endometrium, then spreads to the tubes, then to the ovary and to the peritoneum. In the acute stage of saplingitis the treatment is palliative. The patient should be kept on a liquid diet. She should be put in the Fowler position or the exaggerated Fowler position, and hot douches and cold applications used. If, after trying this treatment the symptoms do not subside, and there is acceleration of the pulse, and the patient's expression is anxious, and the belly begins to balloon up, and she has obstinate constipation with vomiting, then operative treatment is indicated.

Dr. J. H. Carter: I do not agree with Dr. Burch that we cannot make a diagnosis of salpingitis before the inflammation extends to the ovaries and to the broad ligaments, or cellular tissues. Gynecologists operate on these patients after they have been treated in a palliative way, and there are no adhesions and no sign of any inflammation in the broad ligaments or ovary. If we open the abdomen and find a double salpingitis and both tubes have to be removed, I do not believe we are justified in leaving the uterus. It should be removed also.

(To be continued)

CHICAGO PEDIATRIC SOCIETY

Regular meeting, held March 15, 1910

Dr. I. A. Abt in the Chair

Congenital Hypertrophic Pyloric Stenosis, with Report of Case

Dr. G. L. Kaufmann: There is still much difference of opinion as to the etiology of pyloric stenosis. Some cases are cases of pure spasm, which eventually leads to hypertrophy and stenosis, while others are stenotic from the onset, the hypertrophy being secondary.

DISCUSSION

Dr. C. G. Grulee: The Germans regard this as a spastic condition, the hypertrophy being consecutive to the spasm. Americans regard the two conditions as being entirely separate. One foreign writer had 13 or 14 cases, of which number he was able to follow 7 of the patients for several years afterward. In each of these cases there was dilatation of the stomach and increased acidity. Of 19 patients treated without operation, 14 recovered and 5 died. Of 20 patients operated on, 14 recovered and 6 died, so that there is not much in favor of operative treatment. About 3 years ago I had a patient on whom a successful operation had been done. That child is now 4 years old and is well and strong. A gastroduodenostomy was done, and although the child had much trouble the following summer from gastrointestinal disturbance, a complete recovery was made as the result of proper feeding.

Dr. I. W. Abt: It would be interesting to differentiate clinically the cases of spasm from those of true congenital hypertrophic stenosis.

Dr. H. F. Helmholtz: In a recent publication the writer reviewed the records of every case that came to the postmortem. He could not find a single one that would confirm the ideas of a congenital stenosis. In each case there was folding of the mucous membrane, showing that there had been at one time a patulous opening of normal size. This opening had evidently been narrowed by the spasm, so that the stenosis is a secondary affair.

Dr. I. A. Abt: Is it possible that some of these cases have a relation to a spasmophilic diathesis, and that such children later show evidences of tetany or spasmophilia?

Dr. F. X. Walls: I have seen about 15 of these cases; in 12 an operation was done, and I was favorably impressed with the surgical results obtained. The children who had any degree of vitality always seemed to react well to the operation, and those who so reacted recovered. Only 2 children died soon after the operation, and 1 died about a month after the operation from acute gastrointestinal disturbance. The others are living and well. I would suggest surgical intervention as soon as I believed I was losing ground after trying the various methods of medical treatment that had been suggested.

Dr. Effa V. Davis: I would like to suggest toxemia of pregnancy in such cases. I find that children born of mothers who have been mildly toxic usually show conditions that can be traced back to the mother's toxemia.

Dr. F. X. Walls: It is stated that the mother of my patient suffered from gastric disturbance during the pregnancy, and that she took considerable amounts of acid. However, the labor was uneventful and the mother is now entirely well.

Is Compulsory Isolation on the Premises Effective Treatment for Whooping-Cough?

Dr. J. H. Hess: Recently I was criticized by the Chicago Department of Health for allowing a child, ill with whooping-cough to go out into the streets. A somewhat similar experience about 4 years ago has caused me to think seriously about this matter. The family of the patient was told not to take the child out of the flat except by the rear entrance, but that the child might be allowed to play in the backyard. The family lived in a six-flat building. Most physicians are not reporting whooping-cough cases. I report everything, because I feel that by doing so the responsibility is assumed entirely by the Department of Health. However, it must be remembered that many of these cases do not come to the attention of a physician. The child is not ill enough, at least in the opinion of the parents, to require medical attendance; or the child is treated with prescriptions that have been secured from some other patient. The other day a little boy stopped me on the street and asked for a certificate which would readmit him to school. He had had whooping-cough, but had not had medical attention. I would suggest that all houses or apartments in which there are whooping-cough cases be placarded; that the children be taken out into the open air, tagged with a red ribbon, marked whooping-cough. This procedure was first suggested by Grandy, of Norfolk, Va., and in his experience it has proved very effective.

My experience has been that the paroxysms of whooping-cough are in part occasioned by vitiated air. These children are in better health if allowed to be in the fresh air after the paroxysmal stage has passed. The question is: Can they get sufficient fresh air within the four walls of a flat? Fresh air is the accepted treatment for whooping-cough. Instead of depending on the physicians who are not reporting their cases, make every mother an inspector, and every case is sure to be reported.

DISCUSSION

Dr. Heman Spalding, Department of Health: The ordinance requires that the house be placarded and the people in it quarantined. We allow adults to go about their business if they are careful not to get their clothing soiled by the child. We allow children who have had whooping-cough their liberty. Physicians confuse the treatment of a patient with the treatment of the public. We know it is the best thing for the child to go out, but we are not treating the child—we are treating the public. The question of the backyard is an open one. The child will go to the fence and convey the contagion to a neighbor, or out into the alley, and an epidemic results. I have known scores of instances where the contagion was conveyed in that way. As to tagging the child, if that were done, particularly in some parts of Chicago, a mob of children would run after that child, chase him, and try to pull the tag off. In some parts of the city we can do better work without placarding, because even the card attracts curious-minded people. We cannot improve much on our present methods of quarantine. People will hide cases, but by doing so they become law-breakers; some of them get caught at it and pay the penalty. The law requires that parents report such cases if a physician does not. This would cover the cases in which a physician is not in attendance.

Dr. H. W. Cheney: In some neighborhoods quarantine might be discretionary, to a certain extent. The patient might be allowed to go outside of the house if accompanied by the parent or nurse, so that other children could be kept away.

Dr. S. J. Walker: The object of the Department of Health is to limit morbidity and reduce mortality. In the case of infectious diseases of limited duration, this can be done more easily than in the case of whooping-cough. Whooping-cough is extremely widespread, and for two weeks the disease is in the incipient stage. During this time, the disease is spread broadcast, and as these cases are not reported, it is impossible to control that element in the spread of infection. We all know that the best thing for the patient with whooping-cough is plenty of fresh air. It is impossible to obtain enough air in a flat or house or a small backyard. I feel convinced that the mortality from whooping-cough would be much increased if strict quarantine were enforced. The morbidity, however, might be reduced by such a procedure.

Dr. Heman Spalding: Proper quarantine cannot be maintained in any case, except in a hospital, and there is no hospital in this city for that purpose. If one part of a park were set aside for these children, and physicians would superintend getting their patients to that place, it would be all right. One cannot trust nurses, parents, or anybody. Besides, people will say that they are not afraid of the disease. The public must be protected against itself.

Dr. G. Koehler, Department of Health: This may be considered from two points, that of the patient and that of the public, the former in his relation to others, and the latter in its relation to the health officer. The public demands protection from disease. Health officials recognize the increased mortality from whooping-cough and measles. The mortality from scarlet fever and diphtheria is decreasing. Both these conditions must be ascribed to insufficient quarantine, in the first instance, and to effective quarantine, in the second. There is no doubt that the mortality and morbidity of whooping-cough and measles could be reduced considerably if we had effective quarantine. Unfortunately, the diagnosis cannot be made early, and many of these patients do not have medical attendance. It is during the early stages of the disease, when it is practically unrecognizable, that the contagion is spread. This nullifies all efforts that might be made afterward to control the spread of infection. The greatest harm is done before the disease is recognized. Isolation on the premises, from the health officer's standpoint, is the proper thing, and in certain localities it would be impractical to permit these patients to go out anywhere. The number of cases reported is steadily increasing, and consequently the recorded death rate is diminishing. I agree with Dr. Spalding that it would not be a good thing to tag children in certain districts, because of the attention such a tag would attract. In other districts it might be all right.

Dr. I. A. Abt: Adults have whooping-cough as well as children. I have never seen an epidemic of whooping-cough in a family that the father and mother did not also get the disease; therefore, rigid quarantine would seem to be essential. Unfortunately, it is well-known that the only treatment for whooping-cough is fresh air; therefore, sanitarians should also be humanitarians. By keeping these little patients confined within a flat or house we are certainly not doing the best thing for their recovery.

Dr. F. X. Walls: It is difficult to recognize whooping-cough in the early stages; rarely does the patient go to bed. Under such conditions, I doubt that the placarding of the houses has really altered the condition, so far as one might be led to believe. There has been no reduction in mortality. The enforcement of strict quarantine would certainly help considerably, but, under conditions as they exist in whooping-cough, our efforts along the lines of a vigorous quarantine are futile. Quarantine will be opposed and the results to be desired are materially nullified.

Dr. I. D. Rawlings, Department of Health: Placarding is the proper thing. It arouses the people in the neighborhood, and they report every suspicious case. The Department of Health had under consideration the advisability of placing a nurse in the various parks and playgrounds to detect cases of whooping-cough. These places are the breeding-grounds for the spread of infection. I do not believe that it would be wise to tag the child.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arkansas: Regular; Little Rock, May 10-11. Sec., Dr. F. T. Murphy, Brinkley.

Florida: Eclectic; Tampa, May 2. Sec., Dr. Hiram J. Hampton, 1805 Florida Avenue.

Georgia: Regular; Augusta, May 2-3, Atlanta, May 4-7. Sec., Dr. I. H. Goss, 297 Hancock Avenue, Athens. Homeopathic: Atlanta, May 15. Sec., Dr. R. E. Hinman, 153 Whitehall Street.

Louisiana: Regular; New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street. Homeopathic: New Orleans, May 2. Sec., Dr. Gayle Aiken, 1102 St. Charles Avenue.

Massachusetts: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.

Mississippi: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.

Nebraska: State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.

Nevada: Carson City, May 2. Sec., Dr. S. L. Lee.

New York: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

Tennessee: Memphis, Nashville and Knoxville, May 3-4. Sec., Dr. C. A. Abernathy, Pulaski.

New Mexico January Report

Dr. J. A. Massie, secretary of the New Mexico Board of Health and Medical Examiners, reports the written examination held at Santa Fe, Jan. 10, 1910. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. Two candidates were examined, both of whom passed. Sixteen candidates were licensed on presentation of satisfactory credentials. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Tennessee	(1907)	85.8
Gate City Medical College	(1904)	75.4

LICENSED ON CREDENTIALS

College	Year of Grad.	
Chicago Homeopathic Medical College	(1883)	(1896)
Bennett Medical College, Chicago	(1907)	(1909)
University of Iowa, College of Medicine		(1900)
Hospital College of Medicine, Louisville		(1907)
University of Louisville	(1907)	(1909)
Detroit College of Medicine		(1903)
St. Louis College of Physicians and Surgeons	(1899)	(1901)
Columbia University, College of Physicians and Surgeons		(1885)
Western Reserve University		(1908)
Jefferson Medical College		(1907)
University of Pennsylvania		(1899)
Vanderbilt University		(1908)

New Hampshire January Report

Mr. H. C. Morrison, regent of New Hampshire State Board of Medical Examiners, reports the written examination held at Concord, Jan. 4-5, 1910. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 12, of whom 10 passed and 2 failed. One candidate was licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Baltimore Medical College	(1908)	77
Tufts College Med. School	(1907) 85; (1908) 85; (1909) 82,	83
Boston University	(1903) 90; (1908)	91
Dartmouth Medical School	(1908)	80
University of Vermont	(1909) 80,	89

FAILED

College	Year Grad.	Per Cent.
College of Phys. and Surg., Boston	(1908) 71; (1909)	71

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
University of Michigan, Homeopathic College	(1903)	Georgia

Oregon January Report

Dr. R. C. Coffey, secretary of the Oregon State Board of Medical Examiners, reports the written examination held at Portland, Jan. 4-6, 1910. The number of subjects examined in was 15; total number of questions asked, 108; percentage required to pass, 75; 5 per cent. is allowed for ten years of practice. The total number of candidates examined was 70, of whom 44 passed, including 4 non-graduates and 1 osteopath, and 26 failed, including 1 osteopath. The following colleges were represented:

College	Year Grad.	Total No. Examined.
PASSED		
Cooper Medical College	(1903) (1909)	2
Coll. of Physicians and Surgeons, San Francisco	(1902)	1
George Washington University	(1905) (1908)	2
Northwestern University Medical School	(1908)	1
Rush Medical College	(1879) (1895) (1903) (1905) (1907) (1909)	6
Hahnemann Medical College and Hosp., Chicago	(1909)	1
State University of Iowa, College of Medicine	(1908)	1
State Univ. of Iowa, Homeo. College	(1897) (1903)	2
Louisville and Hospital Medical College	(1908)	1
Baltimore University	(1897)	1
Baltimore Medical College	(1904)	1
University of Michigan, College of Med.	(1892) (1908)	2
Hamline University	(1906)	1
University Medical College, Kansas City	(1897)	1
Washington University, St. Louis	(1903)	1
St. Louis College of Phys. and Surg.	(2, 1895) (1897)	3
St. Louis University	(1908)	1
Columbia University, College of Phys. and Surg.	(1905)	1
Western Reserve University	(1908)	1
University of Oregon	(1909)	2
Willamette University	(3, 1907) (1909)	4
Jefferson Medical College	(1904) (1908)	2
Western University, London, Ontario	(1909)	1
FAILED		
Gross Medical College, Denver	(1892)	1
College of Physicians and Surgeons, Chicago	(1906)	1
Hering Medical College	(1908)	1
Hahnemann Medical College and Hosp., Chicago	(1885)	1
Illinois Medical College	(1908)	1
Rush Medical College	(1903)	1
Kentucky School of Medicine, Louisville	(1894) (1908)	2
University of Louisville	(1907)	1
Baltimore Medical College	(1901) (1905)	2
University Medical College, Kansas City	(1900)	1
Barnes Medical College	(1906)	1
Kansas City Medical College	(1896)	1
Ohio Medical University	(1904)	1
Starling Medical College, Columbus	(1901)	1
Eclectic Medical Institute, Cincinnati	(1906)	1
University of Oregon	(1906) (1908)	2
Jefferson Medical College	(1906)	1
Western University of Pennsylvania	(1908) (1909)	2
Memphis Hospital Medical College	(1909)	1
Western University, London, Ontario	(1894)	1
College of Phys. and Surg., Ontario, Canada*	(1903)	1

* This is an examining body; the name of college where medical work was taken was not given.

Marriages

Lester Edwin Mee, M.D., to Miss Charlotte Grubb, both of Chicago, April 27.

Henry M. Rooney, M.D., to Miss May Turner, both of Los Angeles, Cal., April 6.

William B. Evans, M.D., to Miss Mary S. Scott, both of Philadelphia, April 20.

Harvey M. Egolf, M.D., to Miss Bertha Bertch, both of Liberty, Ind., April 10.

George L. Painter, M.D., San Francisco, Cal., to Miss Mary A. Schenck of Alameda, Cal., April 6.

Harry B. Sobernheimer, M.D., Philadelphia, Pa., to Miss Holbrook-Latham of Colorado, April 14.

John A. Hartwell, M.D., New York City, to Miss Mary Butler Fulton, of Port Chester, N. Y., April 16.

Edgar Lyons Woods, M.D., U. S. Navy, to Miss Grace Douglas Anderson, at Alexandria, Va., April 14.

William Preston Miller, M.D., Hagerstown, Md., to Miss Annie Louise McWilliams, at Pasadena, April 26.

Albert Stevens Cunningham, M.D., Goldfield, Iowa, to Miss Myrtle Blodgett of Renwick, Iowa, recently.

Harry French Thompson, M.D., Forest City, Iowa, to Miss Louise Taylor of Alden, Iowa, at Denver, Colo., April 12.

Deaths

George C. Purdue, M.D. Medical College of Evansville, Ind., 1880; a member of the American Medical Association; the Southwestern Surgical Association and Western Surgical and Gynecological Association; surgeon-in-chief at the Wichita, Kan., Hospital; died in New York City, April 12, from peritonitis, following an operation for acute appendicitis, aged 56.

George A. Bradbury, M.D. Albany Medical College, 1883; a member of the American Medical Association; a practitioner of Lansingburg, Troy, N. Y., for more than twenty-five years; a member of the staff of physicians and surgeons of the Leonard Hospital; died at his home in that place, April 9, from angina pectoris, aged 53.

George A. Evans, M.D. Bellevue Hospital Medical College, 1873; a member of the Medical Society of the State of New York; physician to the Howard Colored Asylum, Brooklyn; one of the state medical examiners in lunacy; died at his home in Brooklyn, March 31, aged 59.

Johnson William Hagadorn, M.D. University of Michigan, Department of Medicine and Surgery, 1870; formerly a member of the American Medical Association; a member of the Michigan State Medical Society; died at his home in Lansing, April 17, from apoplexy, aged 70.

James F. Fitzsimmons, M.D. Northwestern University Medical School, Chicago, 1868; a member of the Ohio State Medical Association; a member of the board of pension examining surgeons; died at his home in Bucyrus, April 11, from angina pectoris, aged 66.

James Oakley Pingry, M.D. College of Physicians and Surgeons, New York City, 1868; a member of the Medical Society of the State of New York; a practitioner of Millbrook, N. Y., for thirty-five years; died at his home in that place, April 10, from paralysis, aged 66.

Walter Forester Adams, M.D. Boston University School of Medicine, 1900; a practitioner of Waltham, Mass., until 1907, when he removed to Rutland; died at the State Sanatorium in that place, April 1, from pulmonary tuberculosis, aged 36.

Newton Stephen Bell, M.D. University of Vermont, College of Medicine, Burlington, 1864; a member of the Connecticut State Medical Society; medical examiner and health officer of Windsor, Conn.; died at his home, April 11, aged 70.

Benjamin B. Mozee, M.D. Cincinnati College of Medicine and Surgery, 1869; a member of the Nebraska State Medical Association; of Geneva, Neb.; died at St. Luke's Hospital, Spokane, Wash., April 10, from paralysis, aged 71.

David Madill, M.D. Queen's University, Dublin, Ireland, 1871; of San Francisco; died in Oakland, April 9, as the result of injuries received by being struck by a Southern Pacific train near Sunol a few days before, aged 70.

Edward Ellis Nathan, M.D. Chicago College of Medicine and Surgery, 1905; College of Physicians and Surgeons, Chicago, 1906; died April 18, as the result of drinking cyanide of potassium, with suicidal intent, aged 26.

Johannes Abraham Otte, M.D. University of Michigan, Department of Medicine, 1886; formerly of Grand Rapids, Mich.; a medical missionary at Amoy, China; died of Asiatic cholera at that place, April 14, aged 48.

James M. Barbour, M.D. Homeopathic Hospital College, Cleveland, 187—; of Pittsburg, Kan.; a veteran of the Civil War; died in the Osawatomie State Hospital, April 6, from organic heart disease, aged 73.

Thomas Marion Wilson, M.D. Missouri Medical College, 1881; a member of the American Medical Association; of Eastland, Texas; died at that place, Dec. 14, 1909, from Bright's disease, aged 68.

Lorenzo Dickson Ray, M.D. Rush Medical College, Chicago, 1887; formerly of Gillespieville, Ohio; died at the home of his daughter in Park Rapids, Minn., April 1, from cerebral hemorrhage, aged 61.

Charles P. Turner, M.D. Jefferson Medical College, Philadelphia, 1851; a member of the American Academy of Medicine; died at his home in Philadelphia, April 12, from angina pectoris, aged 84.

T. J. Gordon, M.D. Tulane University, New Orleans, 1857; surgeon of the Twenty-second Louisiana Infantry, C. S. A., during the Civil War; died at his home in McComb City, Miss., April 2, aged 72.

George T. Twyman, M.D. Louisville Medical College, 1879; a member of the American Medical Association; of Independence, Mo.; died at Kansas City, Mo., April 18, from acute diverticulitis, aged 56.

George Farquhar Jones King, M.D. University of Pennsylvania, 1898; a member of the Rhode Island Medical Society; died at his home in Providence, April 12, from pneumonia, aged 43.

Havillia C. Hobbs, M.D. Eclectic Medical Institute, Cincinnati. 1881; a member of the American Medical Association; died at his home in Salem, Ind., April 18, from paralysis, aged 61.

Frederick Stanley Dewey, M.D. Washington University, St. Louis. 1880; formerly of Oklahoma City, Okla.; died at Edmond, Okla., April 13, from carcinoma of the larynx, aged 54.

Thomas Holmes Kennan, M.D. College of Physicians and Surgeons, New York City, 1868; a Confederate veteran; died at his home in Atlanta, Ga., April 10, from paralysis, aged 70.

Horace W. Cox, M.D. Medical Department Willamette University, Salem, Ore., 1879; formerly of Schurz, Nev.; died at his home in Corvallis, Ore., April 14, from arteriosclerosis.

Oel Sage Musick, M.D. Hahnemann Medical College, Chicago, 1893; Rush Medical College, 1894; formerly of Chicago; died in the Elgin State Hospital, April 9, aged 42.

George Foster Simpson, M.D. University of Vermont College of Medicine, Burlington, 1873; of North Adams, Mass.; died at his home, April 10, from myocarditis, aged 60.

David Simpson Richards, M.D. Medical School of Maine, Brunswick, 1856; died at his home in Richmond, Maine, January 7, from cerebral hemorrhage, aged 83.

Robert LeRoy Morgan, M.D. Syracuse University College of Medicine, 1897; formerly of Rochester, N. Y.; died at his home in Tupper Lake, N. Y., April 7, aged 36.

William R. Curtis, M.D. Baltimore University School of Medicine, 1887; of New Martinsville, W. Va.; died at that place, February 5, from locomotor ataxia, aged 45.

Lawrence W. Hart, M.D. St. Louis College of Physicians and Surgeons, 1897; mayor of Morehouse, Mo.; was shot and killed, April 12, by a political enemy.

John Meiners, M.D. Kansas City (Mo.) Hahnemann Medical College, 1905; of Tipton, Kan.; died at that place, January 9, from intestinal obstruction, aged 31.

Frank Howard, M.D. Barnes Medical College, St. Louis, 1898; of San Antonio, Texas; died at that place, February 9, from cardiac apoplexy, aged 59.

Ellington John Morgan, M.D. Jefferson Medical College, Philadelphia, 1860; of Bainbridge, Ga.; died at that place, January 28, of influenza, aged 73.

William Hutchinson, M.D. Rush Medical College, 1875; formerly of Rockford, Ill.; died at the Elgin State Hospital, April 6, from paresis, aged 62.

Edgar Pennypacker Brunner, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1869; died at his home in Philadelphia, April 8, aged 60.

John Joseph Nolan, M.D. St. Louis College of Physicians and Surgeons, 1895; died at his home in Nichols, Iowa, April 10, from pneumonia, aged 41.

Cyrenius G. Clark, M.D. University of Michigan, Department of Medicine, 1864; died at his home in Maumee, Ohio, April 5, from prostatitis, aged 77.

John W. Ashford, M.D. Jefferson Medical College, Philadelphia, 1897; of Watkinsville, Ga.; died at that place, January 21, of tetanus, aged 34.

Max Bruck, M.D. College of Physicians and Surgeons, Baltimore, 1902; of Newark, N. J.; died in Morris Plains, N. J., Oct. 18, 1909, aged 38.

John Haswell Rice, M.D. Castleton (Vt.) Medical College, 1852; of Pomona, Cal.; died at his home, March 21, from pneumonia, aged 83.

Cornelius Wilson Larison, M.D. Geneva (N. Y.) Medical College, 1863; died at his home in Ringoes, N. J., April 15, from paralysis, aged 73.

William Wheelock DeLancey, M.D. Jefferson Medical College, 1908; died in Phoenix, Ariz., March 27, from tuberculosis, aged 28.

Andrew Fairfield Reed, M.D. Harvard Medical School, 1874; of Arlington, Mass.; died at that place, April 15, aged 60.

Samuel W. Vaughan, M.D. Atlanta (Ga.) Medical College, 1858; of Hot Springs, Ark.; died at that place, April 12.

Jerome Keeley, M.D. Jefferson Medical College, 1864; died at his home in Christiana, Pa., April 2, aged 83.

Miscellany

OXIDASES AND PEROXIDASES

Those processes of oxidation which take the form of slow combustions and which occur either spontaneously or under the influence of the so-called oxygen-carrier, are of great interest to physicians because such changes are probably intimately concerned in all biochemical phenomena in which oxygen is involved. It is almost exactly one hundred years since the first investigations in this field were undertaken. During this time our knowledge of such processes has greatly increased, as may be seen from the exhaustive monograph, entitled "The Oxidases and Other Oxygen-catalysts Concerned in Biologic Oxidation," Bulletin No. 59, Hygienic Laboratory, U. S. Public Health and Marine-Hospital Service, by J. H. Kastle, professor of chemistry in the University of Virginia, and formerly chief of the Division of Chemistry, Hygienic Laboratory. The following is an abstract of this bulletin: Such oxidations as occur spontaneously in air or oxygen are known as autoxidations and substances capable of undergoing such oxidation, as autoxidizable substances. In the course of such oxidations, however, it frequently happens that other substances less readily oxidizable are also oxidized along with the autoxidizable substance. In other words, it has been found that one substance often has the power to induce the oxidation of a second substance, which ordinarily is not readily oxidizable. The second substance stands to this process in the relation of an acceptor, in the sense that it combines only with that oxygen which has been rendered active by the oxidation of the autoxidizable substance.

It was early noticed that many oxidations required, in addition to the presence of oxygen or air, certain favoring conditions, such as the presence of moisture, the action of electricity, or the intervention of apparently indifferent substances, such as finely divided metals, certain oxids or the action of living organisms. In explanation of these phenomena various hypotheses have been proposed. The principal theories of autoxidation and oxygen-activation are: (1) the ozone-theory of Schoenbein: (2) the *Spaltungs-Theorie* of Hoppe-Seyler, (3) the ionization theory of Van't Hoff; and (4) the peroxid theory of Traube, Bach, Engler, Manchot and others.

According to Schoenbein, autoxidations are accomplished through the action of ozone and autoxidizable substances are such as have the power of ozonizing the air. He also accounted for the phenomenon of oxygen-carrying on the supposition that ozone is formed through the action of the carrier and from his numerous observations he was led to believe that without the presence of such substances as convert ordinary oxygen into ozone, animals would be suffocated in the midst of an ocean of the purest, but inactive, oxygen as quickly as in a vacuous space. On the other hand, from his study of putrefaction and anaerobic fermentation, Hoppe-Seyler arrived at the notion that oxygen is rendered active through the agency of nascent (active) hydrogen, which in all such processes splits the inactive oxygen molecule into two (active) atoms. With one of these the nascent hydrogen combines to form water, thereby leaving the second oxygen atom also in an active condition and ready to combine with any substance (the acceptor) capable of oxidation. He accounted for the formation of hydrogen peroxid in certain processes of autoxidation on the supposition that even water could be oxidized by the second oxygen atom and this, as afterward pointed out by Traube, constituted the weak point in this theory. The ionization theory of Van't Hoff rests on the assumption that in gaseous oxygen we have a condition of chemical equilibrium represented by the equation $O_2 = O + O$, which may be interpreted to mean that under ordinary conditions gaseous oxygen contains a certain number of dissociated oxygen molecules, and that it is to these (active) ions that oxygen owes its power to oxidize autoxidizable substances. This conception seems really to have originated with Clausius. It received experimental confirmation at the hands of von Helmholtz and Richarz, and others. To Van't Hoff, however, we are indebted for first making use of this concept to explain the distribution of oxygen between two oxidizable substances. It fails, however, to account satisfactorily for the production of peroxids during processes of autoxidation and to this extent is defective.

Finally to Traube we owe the introduction of the following new ideas on the subject:

1. In all processes of oxidation the oxygen molecule as a whole combines with the oxidizable substance to form a peroxid $H_2 + O_2 = H_2O_2$.

2. Water participates in the greater number of autoxidations, hydrogen peroxid being formed as a by-product:

$$Zn + \left.\begin{matrix} HO \\ HO \end{matrix}\right] \left[\begin{matrix} H \\ H \end{matrix}\right. + O_2 = Zn(OH)_2 + H_2O_2$$

3. The phenomenon of oxygen-carrying is due primarily to the oxidation of a second substance by hydrogen peroxid resulting from the oxidation of the carrier in the presence of water.

4. The molecule of water is first decomposed in autoxidations and the hydrogen set free combines with an entire molecule of oxygen to form hydrogen peroxid. $H_2 + O_2 = H_2O_2$.

Later Engler and his co-workers have shown that the primary change consists in the formation of a peroxid of the autoxidizable substance. This may form hydrogen peroxid in the presence of water, or may oxidize another molecule of the autoxidizable substance or may oxidize another less oxidizable substance, the so-called acceptor. Engler and Weissberg assume a partial dissociation of the oxygen molecule giving it free valences as expressed by the graphic formula — O — O —. This may occur under the influence of heat, light, electricity, or predisposing chemical affinity, as in the case of nascent hydrogen, unsaturated organic compounds, etc. This partially dissociated oxygen is ready to unite with an autoxidizable substance forming a peroxid.

Thus the peroxid theory of oxidation accounts for the phenomena of autoxidation and oxygen-carrying on the supposition that spontaneously oxidizable substances have the power to unite directly with a molecule of partially dissociated oxygen to form peroxids.

Numerous examples of such oxidations can be found in the life of plants and animals. During the absorption of oxygen by plants various substances are formed which have the power of effecting oxidations which ordinarily can not be brought about by molecular oxygen alone, such as the bluing of guaiacum, and the decomposition of potassium iodid. These substances are very unstable, being destroyed by heat, by mineral acids and by various poisons. They are called oxidases and are closely connected with the peroxidases which have the power of transferring oxygen from hydrogen peroxid, which they decompose, to other substances and also with the catalases which are able to decompose hydrogen peroxid but cannot cause the oxygen evolved from this compound to unite with other substances. Similar substances are found in animal tissues. It is believed by Portier and Sieber that the oxidases serve the purpose of defense, having the power of destroying toxins. Sieber found that the fibrin of the blood of a normal horse gives no oxidase reaction, whereas the fibrin from a horse immunized against diphtheria toxin gives a blue color with guaiacum, indicating the formation of oxidases in the blood as the result of immunization.

The bluing of guaiacum in the presence of air and certain substances which act as oxygen carriers has long been used as a test for the presence of these substances. As long ago as 1809, the bluing of guaiacum by nitric acid and also by the fresh root of horseradish was noted by Planche, and he and other French observers found similar reactions with other vegetable products and showed that this property was destroyed by boiling. These observers did not, however, recognize the relation of these changes to the oxygen of the air, but Schoenbein, after the discovery of ozone, concluded that in plants and animals there existed substances capable of activating the oxygen of the air by converting it into ozone and of transferring such oxygen from hydrogen peroxid and other peroxids to oxidizable substances. Such substances he called oxygen-exciters and oxygen-carriers. Traube in his study of fermentation recognized the ferments as definite chemical substances and divided them into three classes, one of which he called oxidizing ferments. These he found acted as go-betweens, taking oxygen from the air or from peroxids and transferring it to oxidizable substances, themselves becoming reduced. This process could be repeated over and over again, the ferment remaining unchanged but capable of transferring an indefinite quantity of oxygen to other substances. It is to Bertrand that we owe the introduction of the term "oxidase" into science. He conceived of the oxidases as enzymes with oxidizing power. Duclaux has defined oxidases as substances which at ordinary temperature and under physiologic conditions, carry oxygen rapidly to substances on which, without the intervention of oxidases, ordinary oxygen would act very slowly. The oxidases are very readily soluble in water; they are also readily soluble in glycerin but in other organic solvents thus far investigated, they seem to be insoluble. They are very unstable in aqueous solution, even in the presence of mild antiseptics. They are precipitated by alcohol and can be redissolved by water after precipitation by alcohol and drying. They are non-dialyzable and show their colloid nature by adhering to precipitates (adsorption). They are impaired in their activity by temperatures slightly above that of the body (42 to 45 C.) and are completely destroyed at 100 C. Glycerin solutions of the oxidases are more stable than aqueous solutions. The oxidizing power of the different oxidases is exercised on different substances, but it is not confined to an individual substance as a rule. Thus laccase, an oxidase found in many plants, will oxidize laccol, the oxidizable substance of the lac tree, but will not affect tyrosin. Tyrosinase, on the other hand, oxidizes tyrosin to melanin, but does not affect laccol. Laccase, however, will oxidize a number of substances besides laccol, such as guaiacum, phenolphthalein, etc. Tyrosinase does not affect these reagents, but oxidizes a number of phenolic derivatives which laccase does not affect.

Classification of the Oxidases.—While several classifications of the oxidases have been made the following seems best adapted to present requirements:

1. Laccase: ferments oxidizing guaiacum, guaiacol, hydroquinone, phenolphthalein, tannin, etc., directly by means of atmospheric or dissolved oxygen and without the intervention of hydrogen peroxid. According to Bach and Chodat, laccase consists of a peroxidase, together with an oxygenase (peroxid).

2. Tyrosinase: ferments acting on tyrosin and related substances.

3. Aldehydase: ferments oxidizing aromatic aldehydes and related compounds.

4. Indophenol oxidase (Spitzer): ferments oxidizing a mixture of alpha-naphthol and para-phenylene diamin to indophenol and other substances.

5. The purin oxidases.

6. Glycolytic ferments, causing the disappearance of sugar from animal tissues.

In addition to the oxidases proper, we have among the related ferments and carriers the following: 1. Peroxidases: oxidizing oxidase reagents only in the presence of a peroxid, such as hydrogen peroxid. These are the indirect oxidases (Bourquelot), and the beta-oxidase of Grüss. According to Moore and Whitley, the peroxidase is the only type of oxidizing enzyme concerned in oxidizing processes occurring in living cells and tissues. 2. Catalases (Loew). These ferments actively decompose hydrogen peroxid, but are incapable of effecting the oxidation of oxidase reagents by means of the peroxid. 3. Oxygen-carriers (not true ferments). This class includes such substances as the iron-containing pigments of the blood, hemocyanin, and the gamma-oxidases of Grüss. They activate the oxygen of a peroxid, but differ from the true peroxidases in having greater stability.

Oxidase Reagents.—A considerable number of substances have been used as reagents for detecting the presence of the oxidases and peroxidases and a table of these is given by the author on p. 60 of his monograph. Guaiacum, aloin, phenolphthalein, etc., are examples of these reagents. Some of them have been used for quantitative purposes.

Laccase: Laccase is a ferment found widely distributed in plants, but rarely found in animal tissues, which has the power of oxidizing laccol, a constituent of the juice of the lac tree which turns brown and finally black on exposure to the air. The ferment which brings about this change has also the power of bluing guaiacum, which constitutes a sensitive reagent for detecting its presence. By this reaction its wide distribution has been ascertained. Laccase is very soluble in water and is less readily precipitated by alcohol from its aqueous solutions than tyrosinase which frequently accompanies it. It is not readily destroyed by heat. Solutions containing both laccase and tyrosinase may be freed from the latter by precipitating with alcohol or by heating to 70 C., a temperature which destroys the tyrosinase but does not affect the laccase. The activity of laccase is weakened or destroyed by the action of strong acids, hydrogen sulphid, hydrogen cyanid, and a number of other poisons. Laccase has a protein character, but there is reason to think that it is composed of two substances, one of which has the nature of a peroxid, known as oxygenase and the other a true ferment, having the character of a peroxidase. Laccase always contains a small percentage of manganese. When injected into animals it gives rise to an antibody which retards the action of laccase, but not of tyrosinase. There is some reason to think that laccase from different sources has a somewhat different composition and that when injected into animals different varieties of antilaccase are produced according to the source of the laccase injected.

Tyrosinase: This oxidase is found widely distributed in the vegetable kingdom and is present in animal tissues to a much greater extent than laccase. It produces a red coloring matter which is later converted into a black pigment. The substance oxidized is tyrosin and the pigment produced is melanin. It is believed that tyrosinase is the agent concerned in the production of pigment in the skin of animals including man and that the coloring matter of melanotic tumors is produced from tyrosin in the same manner. Tyrosinase, like laccase, appears to consist of two constituents, an oxygenase which activates atmospheric oxygen and can be replaced by hydrogen peroxid in weak solution, and the other a specific peroxidase which makes possible the absorption of oxygen by tyrosin, either from the oxygenase or from hydrogen peroxid. Some observers have found evidence of the formation of an antityrosinase in the blood serum of animals after the injection of tyrosinase and it appears that the antityrosinase which is produced after the injection of tyrosinase of vegetable origin is different in some respects from that formed after the injection of tyrosinase of animal origin.

Purin Oxidases: From the standpoint of the physician great interest attaches to the oxidation of the purin bases. The precursors of uric acid are xanthin and hypoxanthin and these are converted into uric acid by an oxidase existing in the pulp of the spleen and of the liver. This body has been separated and shown to be capable of converting xanthin and hypoxanthin into uric acid, in a current of air. It does not act, however, on the antecedents of xanthin and hypoxanthin, viz., guanin and adenin. These require first to be converted into xanthin and hypoxanthin respectively, by the removal of an amino group, a process called desamidation, which occurs under the influence of two hydrolytic ferments, known as guanase and adenase.

Peroxidases: These substances are sometimes called indirect oxidizing ferments, for the reason that they cannot accomplish the oxidation of oxidizable substances by means of gaseous or dissolved oxygen. They have the power, however, of accomplishing such oxidations through the instrumentality of hydrogen peroxid and other peroxids. There is much evidence that hydrogen peroxid has the power of uniting with other substances to form unstable peroxids which readily yield their oxygen to oxidizable substances. The peroxidases are found in all living tissues and their presence seems to be essential to the exhibition of vital properties. Seeds which no longer contain peroxidases are incapable of germinating. In the blood the peroxidases have been found especially in the white cells. The investigations of Bach and Chodat and Kastle and others lead to the conclusion that the oxidases are mixtures, composed of a peroxidase with a complex organic peroxid which has been called by Bach and Chodat an oxygenase. This may combine under the influence of the peroxidase with the oxidizable substance to which it imparts its oxygen and is again separated in a reduced form. This reduced form takes oxygen from the air to regenerate the peroxid or oxygenase.

Catalases: The catalases differ from the peroxidases in that while they decompose hydrogen peroxid the oxygen is given off in an inactive form and is incapable of producing oxidation. There is much speculation as to the nature and function of catalases and it may be after all that the statement that they cannot effect or hasten oxidation is too absolute. They may be peculiar forms of the peroxidase.

Oxygen-Carriers Which Are Not Ferments.—A study of the oxidations occurring in the blood shows that it contains several classes of oxidizing ferments, but is after all not dependent on these for its principal oxidizing power. Oxidases are contained in the cells which are separable by water and blue guaiacum directly. There are also found peroxidases which will only act in the presence of hydrogen peroxid and catalases which decompose hydrogen peroxid, but do not effect oxidations. All these substances are decomposed and destroyed by boiling, but the power to blue guaiacum in the presence of hydrogen peroxid remains. It is evident that the power of the blood to blue guaiacum does not depend solely on the above mentioned ferments, but must be attributed mainly to the iron containing hemoglobin or hematin. This acts as an oxygen carrier. This serves to suggest that not all the oxygen-carriers occurring in living tissues have the nature of enzymes and points to the importance of such metals as are capable of existing in two or more states of oxidation for processes of oxidation occurring in living organisms.

Metals Essential Constituents of Oxidases and Peroxidases.—The investigations of Bertrand have shown that laccase owes its oxidizing power to the presence of small quantities of manganese. According to Spitzer the oxidizing power of animal tissues is referable to certain nucleoproteids which they contain and the oxidizing power of these substances is in turn referable to combined iron. So far as known, the most stable and most perfect of the oxygen catalysts occurring in the animal organism contain either copper or iron. Lepinois found both manganese and iron in the oxidase of the roots and leaves of aconite and belladonna and Aso found the same to be true of the oxidase of tea leaves. According to Bach and Chodat manganese is also the active agent of the peroxidases. Some oxidases contain no manganese, but do contain iron.

It is evident, therefore, that certain metals, such as iron, manganese, or copper, one or more of them, enter into the composition of the oxygen-carriers present in the living organism as essential ingredients. These metals or their salts are capable of existing in the colloidal condition in which form they are capable of accelerating chemical processes. They may combine by adsorption with other colloids and when in such combination present many of the properties of the natural oxidases and peroxidases. Garrigou has found certain metals to exist in a colloidal condition in mineral waters. According to this author such substances possess the power of natural oxidases and to them he ascribes the beneficial results which attend the drinking of such waters and which result from more vigorous oxidations in the tissues. It seems that colloidal solutions of any metal capable of existing in two or more states of oxidation should exhibit properties similar to those shown by the oxidases. A. and L. Lumiere and Chevrotier have found that the death of animals by tetanus toxin was greatly delayed by the administration of artificial oxidases and that with a slightly acid oxidase and tetanus toxin the animal did not show the slightest sign of intoxication. Wolff has shown that certain mineral salts can play the part of peroxidases. Thus with infinitesimal amounts of colloidal ferrocyanid of iron he claims to have been able to reproduce all the reactions of the peroxidases. He points out that it acts in all respects like a natural enzyme. He also points out the important rôle that the alkalinity of the liquid plays in such oxidation phenomena. Perhaps these investigations may point the way to a better understanding of the phenomena of disease and suggest therapeutic applications which will materially enrich the armamentarium of the physician.

Medicolegal

"Chiropractor" Guilty of Practicing Without a License—Validity of Statute Conferring Power on Examining Board

The Supreme Court of Iowa says that the indictment in the case of State vs. Miller (124 N. W. R. 167) charged that the defendant "did wrongfully and unlawfully publicly profess to be a physician and assume the duties of a physician, and then and there wrongfully, falsely and unlawfully did publicly profess to cure and heal diseases, nervous disorders, displacements, injuries and ailments by means of a certain system and treatment known as chiropractic," etc.

He advertised as follows: "Dr. F. M. Miller, chiropractor. . . . Read carefully the contents of this booklet. It will interest you. The cure of disease. Cure of disease follows chiropractic adjustment because chiropractic removes the cause. Chiropractic is a distinct and complete drugless and knifeless system and has nothing in common with osteopathy, massage, Swedish movement or any other system. Chiropractic is successful in all forms of disease. This means your disease. If your case is numbered among those supposed impossibilities, do not despair. Try chiropractic and get well. . . . Chiropractic is a common-sense treatment. It will bear investigation. It is based on a correct knowledge of the nervous tissues. It adjusts all displacements and allows the innate builder to reconstruct the broken-down tissues."

The evidence showed that the defendant treated patients for a consideration, and that he professed to cure and heal diverse diseases by the use of his system. He gave no medicine, nor did he prescribe medicine. His system consisted of certain mechanical appliances which were used in connection with hand manipulations and an electric vibrator. The court cannot agree with the contention that the evidence wholly failed to show that any offense was committed by the defendant. The facts in the case brought it clearly within the construction given the statute in State vs. Edmunds, 127 Iowa, 333; State vs. Bair, 112 Iowa, 466; and State vs. Heath, 125 Iowa, 585. The cases from other jurisdictions cited by the defendant were, of course, not controlling. In fact, most of them were based on statutes unlike that of Iowa.

The trial court received testimony that the treatment given by the defendant was beneficial to some of his patients, but the jury were afterward instructed to disregard such evidence. The instruction was right.

The indictment was assailed on the ground that it charged no crime, but it charged a violation of the statute in substantially the language of the latter, and that was sufficient.

Nor does the court agree with the contention that the Iowa statute under which the prosecution was brought is unconstitutional. The only new question presented with regard to it was in the contention that it makes an unwarranted delegation of authority to the State Board of Health. The chapter under consideration provides that the Board of Medical Examiners shall consist of the physicians of the State Board of Health, and names the subjects that shall be covered by the examination. The physicians of the State Board of Health are appointed by the governor. Section 2582 of the Iowa Code and Supplement provides that all persons desiring to practice medicine in the state must submit to an examination, and also present diplomas from some medical school of recognized standing.

It was contended that the power thus given to the board of examiners might be so exercised as to exceed proper police protection, and because of such possibility the statute was unconstitutional. But a statute is not unconstitutional because it provides a board for certain purposes and gives such a board discretion. Such a statute does not discriminate against any class of citizens. Nor does it confer on the board of examiners arbitrary power, or enable it to discriminate in favor of any particular school of medicine. While the board acts within its reasonable discretion, it will be protected, but, when it seeks to go beyond that and to act illegally, the court will interfere. A medical board of examiners may prescribe reasonable rules and regulations for the conduct of its work. The statute itself furnishes no warrant for an unjust discrimination, and the courts will not presume for the purpose of holding it unconstitutional that the board will exceed its power, or do any unlawful act.

There was a conviction in this case of practicing medicine without a license, and there being no substantial error in the record, the judgment is affirmed.

Duties to Sick Seamen of Masters of Small Ships

The United States District Court, in Virginia, says, in the case of The M. E. Luckenbach (174 Fed. R. 265), a steam tug, that a fireman thereon fell sick on a voyage from Newport News, Va., to Colon, Panama, when some seven days out from Colon; that the boat stopped at Colon two days, and then proceeded to Port Antonio, consuming one day en route and remaining there one day, after which it proceeded to New York, consuming seven days, and three days later the man was sent to a hospital, where it was ascertained that he had typhoid fever. The ship's master seemed to have proceeded largely on the theory that it was the man's duty either to have gone personally to see, or to have asked for, a physician, or requested to be sent to a hospital; and to have also apparently acted on the idea, in which he may doubtless have been sincere at first, that the man was only slightly sick. But in all this he manifestly failed to recognize his obligation in the premises. It was the duty of the master to look out for the care and health of the man, whether he made a request of him so to do or not; and from the testimony it was clear that the man's condition, lasting during a period of seven days before reaching Colon, was such as to require of the master, in the exercise of that degree of care, consideration and responsibility which his position imposed on him, to see what was the character of the fever from which he was suffering, and was something as to which he could not hesitate, vacillate, speculate or take chances on. Ships the size of this one having no physician on board, the crew have to look to the master for proper care and medical treatment in matters affecting their health; and, when taken ill on a voyage, the laws of humanity require that the master, having sick members of his crew in charge, should treat them with the utmost care, kindness and consideration consistent with the circumstances in which he is placed, and see that intelligent medical assistance is furnished as soon as possible. In cases of emergency, voyages have to be deviated from; and there would certainly seem to be no good excuse why, on arrival at a port with a sick man on board, medical advice should not be had at once, and the seaman sent to a hospital, if necessary. In this case not only was the negligence of the master apparent in his failure to secure proper medical aid and hospital treatment at the earliest practicable moment, but the failure to send for a physician after the arrival of the vessel at the port of New York for a period of three days was under the circumstances inexcusable, if not inhuman. In conclusion, the court thinks that an award of $1,200 would be reasonable for the suffering that the man had been subjected to and the damages he had sustained.

What Employer's Contract for Care at Hospital Includes

The Supreme Court of Colorado says, in the personal injury case of Miller vs. Camp Bird (105 Pac. R. 1105), that the plaintiff alleged that, as a part of the contract of employment between himself and the defendant, the latter was to provide him with such medical and hospital treatment as might become necessary or proper in the treatment of any injuries he might receive in its employ. But it could not in reason be maintained that, if the defendant contracted at all, it contracted to do more than to furnish such reasonable care as the hospital at Ouray afforded. Such hospitals are not equipped with all kinds of specialists. The plaintiff would certainly not maintain that, if it became necessary for his proper treatment that he consult an eminent specialist in New York, the company was bound to furnish such specialist, either at the hospital at Ouray or in New York. It was likewise too much to say that the company was bound to furnish a specialist either at the hospital or in Denver. The company furnished such care as the hospital in Ouray afforded, and as could be reasonably expected—at least no complaint was made of it. That was all that could be required.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

April 16

1 *The Essentials of the Physiology and Pathology of Digestion. I. Levin, New York.
2 The Psychology of the Consumptive. M. Fishberg, New York.
3 *Therapeutic Drainage in 185 Cases of Uterine Obstruction. A. E. Gallant, New York.
4 *Fatal Factors in Pneumonia. G. Werley, El Paso, Tex.
5 Psychiatry and the General Practitioner. P. B. Brooks, Norwich, N. Y.
6 Anomalies and Points for the Surgeon to Bear in Mind. C. F. Disen, Brooklyn.
7 Hemorrhage after Removal of the Turbinated Bodies. J. Solow, Brooklyn.

1. **Physiology and Pathology of Digestion.**—Levin points out that the main danger to the organism lies in intoxication by foodstuffs only partially digested in the gastrointestinal tract, or by products of the metabolism of bacteria always present in every segment of the digestive organs. All these toxic substances on entering into the circulation exercise a deleterious effect on every organ of the body, skin, circulatory system, even the mind. The most remarkable illustration of the dependence of every organ of the body on the functions of the digestive organs we see in pellagra. The disease is caused by faulty corn. It begins with stomatitis, continues with gastric disturbances, then with skin lesion, and finally ends with depressive insanity.

3. Abstracted in THE JOURNAL, June 5, 1909, p. 1868.

4. **Fatal Factors in Pneumonia.**—Of all fatal factors in pneumonia, lack of early, complete and continuous rest in the horizontal position is in Werley's opinion responsible for more deaths than any other one thing. A considerable mortality from pneumonia is inevitable. But the inevitable mortality is far less than what is occurring at the present time. There is no serious infectious disease against which the body has more perfect means of natural defense. If only given a good fighting chance, a complete cure is generally effected in from 5 to 10 days without the aid (?) of any "specific" whatever. The body will take care of the pneumococcus if we take care of the body. The great fatal factors in pneumonia, he says, are, half enough water; half enough air, half enough rest; and too much meddlesome medication.

Boston Medical and Surgical Journal

April 14

8 *Treatment of Paralytic Deformity. R. W. Lovett, Boston.
9 *Diagnosis and Treatment of Peritonitis of the Upper Abdomen. J. B. Deaver, Philadelphia.
10 *Metabolism Experiment on an Infant after Gastroenterostomy for Congenital Stenosis. F. B. Talbot, Boston.
11 Chronic Primary Intussusception in the Adult (continued). H. W. Goodall, Boston.

8. Abstracted in THE JOURNAL, Oct. 9, 1909, p. 1225.

9. **Peritonitis of the Upper Abdomen.**—Withdrawal of all food by mouth, the Fowler position and continuous saline proctoclysis have become the recognized factors in the treatment of acute infections of any part of the peritoneal cavity. At the time of operation, proper drainage must be instituted at the operative site, and it is Deaver's practice in all cases of diffuse or diffusing upper abdominal peritonitis, to insert a glass tube into the pelvis through a suprapubic stab wound. Whatever methods may be chosen, he says, the fact remains that in early diagnosis and early treatment we may be successful; if we allow our cases to progress, the issue must be fatal.

10. **Metabolism Experiment After Gastroenterostomy.**—A male baby, aged 6 weeks, was operated on for congenital stenosis of the pylorus. At the age of 5½ months the baby weighed 12 pounds 12 ounces, having gained 4 pounds since operation. The stools were gathered on November 12, 13, 14, a period of three days, and samples of the milk ingested on November 11, 12, 13, 14, were analyzed for fat and nitrogen. The analyses are recorded in tables. The figures indicate that the digestion and absorption of the fat and nitrogen were normal in this baby three and one-half months after the operation, and they are evidence that the operation of gastroenterostomy does not change the powers of digestion of these two food components and agree with the results published by Talbot in earlier investigations.

New York Medical Journal

April 9

12 *The Cammidge Reaction in the Urine. J. M. Swan and J. J. Gilbride, Philadelphia.
13 Urethrotomy. T. M. Townsend and J. J. Valentine, New York.
14 Acquired Syphilis in an Hereditary Luetic. O. L. Suggett, St. Louis.
15 Differential Diagnosis of Locomotor Ataxia. C. W. Burr, Philadelphia.
16 *Disease of the Hypophysis. F. W. Marlow, Syracuse, N. Y.
17 Infant Mortality in Obstetric Practice. I. L. Hill, New York.
18 Tuberculosis of the Hip Joint. I. D. Steinhardt, New York.
19 Principles of Roentgenotherapy. S. Tousey, New York.

12. **Cammidge Reaction.**—An experience with two cases caused Swan and Gilbride to make a study of numerous cases to determine the frequency of the occurrence of this reaction and its bearing on the diagnosis of pancreatic disease. While, as a rule, they selected patients for the purpose of this study who presented abdominal symptoms, they also performed the test in a number of cases in which the patients presented no such symptoms. They found the Cammidge reaction positive in 3 cases of pancreatic disease, in 2 cases of carcinoma of the pancreas, and in a variety of diseases besides those of the pancreas, as diagnosticated by clinical methods alone. Many of the patients were suffering from diseases of the abdominal organs: 21 out of 47, such as cholecystitis, carcinoma of the stomach and typhoid.

In many other cases in which a positive reaction was found, such as varicose ulcer of the leg, fracture of the leg, burns of the thighs, sarcoma of the inguinal lymph nodes, and valvular heart disease, arteriosclerotic processes were progressing in the patients, and enough disturbance of the circulation in the pancreas might easily have resulted so that the substance which gives the reaction would have been formed and excreted. Swan and Gilbride think it a mistake to interpret every positive Cammidge reaction as indicative of organic disease of the pancreas. They believe that the positive reaction indicates a disturbed pancreatic function, and that the substance in the urine which produces the crystals results either from disorder of the pancreatic secretion or from the elimination of small quantities of maltose or other disaccharid.

The Cammidge reaction, they say, should never be used as a guide to the performance of an operation unless the test with phenylhydrazin hydrochlorid has been done and has failed to produce in crystals. If this reaction gives no crystals and the Cammidge reaction is still positive and the patient complains of upper abdominal symptoms, particularly pain, the reaction may be looked on as a link in the chain of evidence pointing either to pancreatic disease, disease of the gall-bladder, or disease of some neighboring organ. In the absence of such symptoms the presence of the reaction even with absence of m crystals in the phenylhydrazin hydrochlorid tube should be looked on merely as an interesting discovery.

16. **Disease of the Hypophysis.**—Briefly summed up Marlow's patient, a woman, presented the following symptoms: Amenorrhea, polyuria (6 quarts in 24 hours); some thirst; some headache; numbness of the hands; and increase in fat; in addition to the peculiar defect in vision which led to the diagnosis of the disease. Her symptoms were accounted for by assuming an increase in the size of the hypophysis with a diminution of the functional activity of its anterior lobe. The assumption of increase in size was necessary to account for the visual symptoms which surely point to pressure on the chiasm. Marlow regards it as probable that the disease is either of the nature of a new growth or that cystic disease of

the anterior lobe is present, for either of these conditions would tend to diminish its functional activity. Chief interest in the case, however, lies in the marked improvement in vision which occurred after the administration of thyroid extract; the improvement, however, being limited to the visual acuteness and to the diminution of headache; the polyuria, amenorrhea and adiposity continuing.

Medical Fortnightly, St. Louis

March 25

20 Rational Treatment of Typhoid. G. L. Servoss, Fairview, Nev.
21 The Physical Basis of Life; Query. J. Clements, Wichita, Kan.
22 Pyuria in Latent Genito-urinary Lesions. F. C. Walsh, San Antonio.
23 Advantages of the Urine Examination. H. R. Harrower, Chicago.

Wisconsin Medical Journal, Milwaukee

March

24 Rôle of the Practicing Physician in the Defense of Medical Research. J. Erlanger, Madison.
25 Reminiscences of Some of the Earlier Medical Practice in Wisconsin. G. W. Jenkins, Kilbourn.
26 Decompression as a Primary Procedure in the Treatment of Intracranial Lesions. C. H. Lemon, Milwaukee.
27 The Eye as a Factor in the Diagnosis of Increased Intracranial Tension. N. M. Black, Milwaukee.
28 Pellagra. C. F. North, Beaver Dam.

Montreal Medical Journal

March

29 Demonstration of the Trachoma Bodies. S. H. McKee, Montreal.
30 Tabes Dorsalis and the *Ersatz-Theorie*. C. K. Russel, Montreal.
31 A Critical Estimate of the Medical Education of the Day with [illegible] Reorganization of the Physiologic De- [illegible] University. W. Mills, Montreal.
32 Lo [illegible] Some Others. H. M. Little, Montreal.
33 Five Cases of Tuberculosis of and About the Eyes. R. Kerry, Montreal.

The Journal of Nervous and Mental Diseases, Lancaster, Pa.

March

34 *Protracted Cerebrospinal Syphilis with Striking Intermittency of Symptoms. J. J. Putnam and E. E. Southard, Boston, and A. H. Ruggles, Providence.
35 *Paralysis Following Relapses and Second Attacks of Diphtheria. J. D. Rolleston, London, Eng.
36 The Spasmodic Type of Syringomyelia. G. W. Howland, London.

34. **Protracted Cerebrospinal Syphilis.**—The varied problems and considerations of this case may be presented as follows: A protracted case of cerebrospinal syphilis shows at the end of 16 years after infection and 11 years after initial nerve symptoms, a multiplicity of chronic lesions, but shows few acute lesions. Search for spirochetes so far has been negative. On the basis of gross and histologic findings, the authors regard it as possible to correlate many of the various clinical features: (a) transverse myelitis, (b) intermittent cranial nerve and other symptoms with structural disorder. But there were hysterical tendencies throughout which rendered exact correlations difficult *intra vitam*. The intermittency of symptoms was striking and an enumeration of histologic possibilities is given which might account for this intermittency (acute and reparative changes in the pia mater; cellular and fibrillar gliosis, whether nuclear, periradicular, or, in some cases, intraradicular; and the corset-like contraction of whole regions subject to sclerosis, with consequent herniation of small bits of nerve tissue).

The intermittency and varied structural origin of the symptoms as well as the maintenance to the last of acute changes were reasons for optimism, the authors believed, in pushing antisyphilitic treatment. Incidentally, the postmortem data show how lumbar puncture might fail to reveal lymphocytes in cerebrospinal syphilis, provided that there is an occlusion of the intermeningeal space by adhesions above the point of puncture. The case presented a kind of reversal of the biologic tendency that the structures later evolved shall be destroyed first, since the course of lesions in this case was largely ascending throughout and the cerebral cortex was left at the last, a species of shell from which the lower functioning mechanisms had been successfully scooped out by disease.

35. **Paralysis Following Diphtheria.**—In this paper, which is based on personal observations made on 1,600 complete cases of diphtheria at the Grove Hospital, an artificial distinction is made between relapses and second attacks. By a "relapse" is meant the reappearance of the disease after recovery from the initial attack, but before discharge of patient from hospital. The term "second attack" is applied to cases in which the two illnesses did not occur during a single period of detention in hospital. In all the relapses and second attacks as well as in the primary disease, the clinical diagnosis received bacteriologic confirmation, so as to exclude those cases of non-specific tonsillitis, which are not infrequent in convalescence from diphtheria.

In the 1,600 patients 27, or 1.6 per cent., had relapses, which were separated from the initial angina by intervals ranging from 3 to 14 weeks. The average date for their occurrence was about the middle of the sixth week. Two of the 27 had palatal and ocular palsies after the primary attack, but none showed any signs of paralysis after the relapse. Thirty-six, or 2.2 per cent., had second attacks, between which and the first there were intervals ranging from 3 months to 14 years. The period of predilection was the first 3 years, during which 22 of the 36 took place. In 18 the first attack had occurred in the same hospital, so that the records were available. One of the patients had paralysis during the first attack only, and 3 had paralysis during the second illness who had previously escaped any nervous sequelæ. In only one patient were both attacks followed by paralysis. Rolleston insists on the fact universally accepted by the physicians of large fever hospitals, but contested by some neurologists, that the frequency and severity of diphtheritic paralysis bear a direct relation to the initial angina. The partial immunity conferred by the primary attack and the initial dose of antitoxin was the cause of none of the relapses, displaying those features of malignancy which are manifested by severe local symptoms, deficient reaction to antitoxin and a high mortality, and are followed by a precocious paralysis, which in survivors is of unusually long duration. Second attacks, on the other hand, do not always run a mild course, since 5 such patients had severe local symptoms, and 2 developed paralysis, in one case fatal. It would seem that the immunity conferred by the first attack had been exhausted owing to the length of the interval which in these 5 cases ranged from 1 to 3 years.

Journal Arkansas Medical Society, Little Rock

March

37 Uremia. J. A. Moore, Lisbon.
38 Education of the Laity. J. S. Jenkins, Pine Bluff.
39 Typhoid Fever. E. R. Dibrell, Little Rock.

St. Louis Medical Review

March

40 The Abuse of Medical Charities in Chicago. C. J. Whalen, Chicago.
41 The Influence on Phagocytosis of Alterations in the Osmotic Tension of the Serum and of Electrolytes and of Non-Electrolytes. O. H. Brown, St. Louis.
42 Tuberculous Lesions Illustrated by the Roentgen Rays. R. H. Boggs, Pittsburg, Pa.
43 Tuberculosis. J. V. Shoemaker, Philadelphia.

American Journal of Medical Sciences, Philadelphia

April

44 *Certain Vasomotor, Sensory, and Muscular Phenomena Associated with Cervical Rib. W. Osler, Oxford, Eng.
45 *Functions of the Pituitary Body. H. Cushing, Baltimore.
46 *An Acute Infectious Disease of Unknown Origin. N. E. Brill, New York.
47 *Adams-Stokes Syndrome of Prolonged Duration, ending in [illegible] H. C. Earnshaw, Rosemont, Pa.
48 * [illegible] Death. J. D. Heard, Pittsburg.
49 [illegible] J. D. Madison, Milwaukee.
50 * [illegible] Meningitis. E. F. McCampbell and G. [illegible] bus, Ohio.
51 Serous Meningitis in Typhoid: Treatment by Lumbar Puncture. R. Stein, New York.
52 *Tumors of the Acoustic Nerve, their Symptoms and Surgical Treatment. M. A. Starr, New York.
53 *Treatment of Hemorrhage of the Spleen. J. G. Sheldon, Kansas City, Mo.

44. **Cervical Rib.**—Osler refers to such symptoms as redness, pain and stiffness of the arm on exertion, the origin of which was shrouded in mystery till the *x*-ray disclosed a cervical rib. In many cases the subclavian artery has been compressed in the angle between the rib and the scalenus anticus. When at rest, and with very slight muscular effort, enough blood reaches the limb, but the demand for more blood which follows exertion is not met, and there is stiffness and numbness with vascular changes. So marked may these latter be, says

Osler, that there are cases reported suggesting Raynaud's disease, and in at least seven instances local gangrene has followed. In a few cases, dilatation of the vessel, a cylindrical aneurism, or even a sacculated tumor has been present.

45. The Functions of the Pituitary Body.—The pituitary body is a double organ in the sense that the secretion of its anterior and solidly epithelial portion discharges into the blood sinuses which traverse this part of the gland; whereas the hyaline substance, apparently the product of secretion from the epithelial investment of the posterior lobe, enters the cerebrospinal space by way of channels in the pars nervosa. Though possessing a physiologically active principle, as shown by the results of injections, the secretion of the posterior lobe does not seem to be so vitally essential to physiologic equilibrium as that of the anterior lobe, the total removal of which leads to death with a peculiar train of symptoms which set in at an early date in the adult and after a longer interval in younger animals. Alterations in the gland, which often ultimately assume the character of a malignant growth (adenoma) but which presumably at least in their earlier stages, represent an hypertrophy, are common in clinical conditions of overgrowth (acromegaly and gigantism), and certain feeding experiments lend support to the view that these clinical states represent the consequence of hyperactivity of the pars anterior. Partial removals of the anterior lobe usually lead to obvious disturbances of metabolism often accompanied by adiposity, and in the young by a persistence of infantilism, or in adults by a tendency to lose the secondary sexual characteristics. Cushing regards it as probable that certain of the symptoms known to accompany hypophyseal disease may be consequent on a secondary change in other glands which follows the primary lesion of the hypophysis. These changes are seemingly more outspoken and more widespread after a lesion of the pituitary body than after a corresponding lesion of any other individual member of the group of ductless glands, and in view of its unusually well-protected position one might have conjectured that it must represent a vitally important organ.

46. Acute Infectious Disease of Unknown Origin.—Brill's paper is based on a careful clinical study of 221 patients suffering from an acute infectious disease, which was begun in 1896, and carried on since then. At that time, with a fairly large typhoid service at Mount Sinai Hospital, he noticed a type of disease occurring mainly in the summer and fall months, somewhat similar but characterized by many features irreconcilable to the picture of typhoid, such as the course (being 12 to 14 days), the temperature descent, which was mostly by crisis, the eruption, which was maculopapular and did not disappear on pressure, and the absence of the Widal reaction in this group. The disease is characterized by a short incubation period (4 or 5 days), a period of continuous fever, accompanied by intense headache, apathy and prostration, a profuse and extensive erythematous maculopapular eruption, all of about 2 weeks' duration, whereon the fever abruptly ceases either by crises within a few hours or by rapid lysis within 3 days, when all symptoms disappear. There was no evidence of the disease being directly communicable. The evidence of infection by the recovery of the offending organism in this disease is entirely wanting. The prognosis is invariably good, no deaths occurred in this series. The treatment is entirely symptomatic.

47. Adams-Stokes Syndrome.—The case which Earnshaw reports is that of an individual who has suffered from a number of prolonged attacks of complete auriculoventricular heart block, and who made what for a time appeared to be a perfect recovery; but very recently he suffered a recurrence of the heart-block that lasted several days and then disappeared. During the first attack nitroglycerin was given, 1/200 gr. every 2 hours. This drug was also used for a time during the second attack. There did not seem to be any effect from its use on the pulse rate. Strychnin sulphate was used in all the attacks for its general tonic effect. Morphin and oxygen were used. Counterirritation to the epigastrium in the form of a mustard plaster, infusion of scoparius, quinin, caffein, massage, potassium iodid, aromatic spirits of ammonia, cocain and cerium oxalate were also used. The patient's condition remained unchanged. Strychnin nitrate, 1/30 grain, was ordered thrice daily, and was continued for a month when it was withdrawn gradually. After a week there was no evidence of heart-block. Whether the administration of strychnin nitrate had any direct effect in causing the heart-block to disappear, Earnshaw was unable to determine. The patient had been taking strychnin sulphate, earlier in the attack, for a long time without any apparent benefit; but immediately following the administration of the nitrate the heart-block began to disappear in a most pronounced and dramatic manner. The most reasonable explanation which we have been able to formulate in explanation of the present case has been a vasomotor one, probably engrafted on some sclerotic change in the bundle of His, or its nutrient vessels. It is conceivable that if for some reason the blood supply of the bundle was temporarily cut off or diminished, it would cease functionating so long as the anemia kept up, and again take on its normal activity when its blood supply was reestablished. That there may have been some such diminution of blood supply resulting from round-cell infiltration, arterial spasm, or constriction, or alteration in local blood-pressure would be nearly as difficult to deny as it would be to prove. At all events, Earnshaw regards this as the most rational explanation which can be offered to explain the case in question.

48. Cardiac Death.—The first case cited by Heard appears to be a typical one of cardiac death occurring in convalescence from diphtheria. The second patient was 54 years old. She had been a healthy child up until her ninth year, at which time she had an attack of scarlet fever, moderate in its severity. There were apparently no complications, and she was subsequently in good health until 3 years later, when she passed through a severe attack of diphtheria. She was confined to bed for 4 months. The cause of this protracted illness is unknown, but the family states definitely that there were no paralyses. A short time after she was able to be on her feet again, she began to suffer from severe attacks of asthma, usually lasting 3 or 4 days. During the intermissions, of several weeks' duration, she was entirely free from respiratory disorder. She never, however, regained her previous bodily strength. When 20 years of age, she began for the first time to complain of palpitation during her asthmatic attacks, although she continued free from cardiac symptoms during the intermissions. Following a change of dwelling to a somewhat higher altitude, the attacks of asthma and palpitation greatly diminished in frequency, and she had comparative freedom for nearly 12 years, when the symptoms of cardiac insufficiency began to return and to assume the major rôle. She still had attacks of asthma and suffered from bronchitis and emphysema; but the heart was evidently somewhat crippled at this time, for she was very short of breath on exertion, and edema set in. There were frequent attacks of tachycardia, and the family later began to notice a dusky color about her lips and fingers. Her asthmatic attacks were comparatively infrequent from this time on, but the cyanosis became so marked that a sister described her as having times when her hands would be "black to the knuckles." The latter condition set in about 2 years before her death, and had no relation with the attacks of dyspnea. During the last few months there were "two occasions when the forehead and cheeks were almost black." She complained of dyspeptic symptoms and pain in the right hypochondrium. During the 2 months before her death, her sister noticed a throbbing of the veins of the neck—this an independent observation and not the result of a leading question. The skin was always sallow. She began to be apathetic, but in spite of her discomfort, was able to attend to light duties about the house.

The important point to be considered is, whether a myocarditis arising in childhood could affect the heart during so long a period as 42 years. It may be concluded with a fair degree of certainty that the cause of death was incompetence of a heart muscle, probably the seat of a chronic myocarditis. This conditon may have originated at the time of the infection with diphtheria during childhood, or, at least, the soil may have been prepared at that time for subsequent cardiac disease. That the scarlatinal infection may have exerted some unfavorable influence cannot, of course, be denied. At any rate, owing to repeated strain and in various unfavorable conditions there gradually developed the incompetence of the muscle for the work required of it. Dilatation of the right ventricle set in with relative insufficiency of the tricuspid valves; the fatal end was precipitated by a sudden increase in resistance in the pulmonary circuit, with possibly a further weakening of the muscle as a result of the action of the toxic products of a pneumococcus infection.

50. **Pneumococcus Meningitis.**—This case is typical of practically all cases of pneumococcus meningitis. The following points may be noted in regard to this disease: (1) its virulent and fatal character; 99 per cent. of all patients die; (2) the greenish-yellow character of the exudate which is markedly cellular and fibrinous in constitution; (3) the polymorphonuclear and endothelial cell infiltration of the cortex of the brain—this change is, on the whole, less marked than in the other forms of meningitis; (4) the increase in neuroglia in the subpia and in the cranial nerves; (5) the infiltration of the walls of the arteries with leucocytes and exudate, causing a spreading apart of the intima and media and in addition the infiltration of the veins with leucocytes.

52. **Tumors of the Acoustic Nerve.**—The study of the nature of the tumors found and removed has an important bearing on the prognosis in operations for brain tumor. A recent study of the pathology of acoustic tumors by F. Henschen, quoted by Starr, has shown that of 145 such tumors examined, 133 were solitary and 12 were multiple. It is interesting to note that a majority of the solitary tumors were fibromas, fibrosarcomas, or cysts, encapsulated, non-adherent, and from the standpoint of the pathologist, removable surgically. It is evident, therefore, that the danger of relapse after operation for an acoustic tumor is far less than in cases of tumor elsewhere. Henchen calls attention to the fact that the acoustic nerve is the only cranial nerve frequently affected by a tumor. He brings this fact into relation with the observation that in embryonal growth the bone tissue which surrounds the acoustic nerve is formed later than that about the other cranial nerves, at their exit, and hence that embryonal connective tissue persists around this nerve later than elsewhere. He shows that tumors of this nerve usually (in 8 cases out of 9 examined by him) have a small pedicle entering the acoustic foramen or internal auditory meatus, the nature of which is fibrous, and he suggests that it is the proliferation of this fibrous embryonal connective tissue which gives rise to the tumor. In 83 of the 145 cases examined by him, such fibrous tissue was found in the tumor. The possibility of such multiple tumors must always be regarded. Starr says, in making a diagnosis, especially as symptoms referable to the cranial nerves on both sides have not infrequently been observed, but bilateral symptoms do not always indicate multiple tumors. In cases with autopsy it has been found that pressure on the tumor on one side not only implicated the nerves on that side, but also displaced the pons and medulla toward the side so as to cause compression of the cranial nerves on the side opposite to the tumor, thus producing the bilateral symptoms. This fact should not, therefore, preclude operation.

53. **Hemorrhage of the Spleen.**—The procedure described for the treatment of wounds of the spleen consists of the application to the splenic pedicle of a large flexible clamp, the blades of which are protected with rubber tubing, tightly enough to occlude the vessels, but not to crush them. This clamp protrudes through the abdominal incision and is left in place for four hours. Then it is unlocked. If no bleeding occurs—as can be determined by the appearance of fresh blood in the wound, and the condition of the patient—the clamp is removed. The splenic wound is not treated in any way. After the splenic circulation has been shut off by the clamp, the vessels in the splenic wound empty themselves by draining into the peritoneal cavity, and their cut ends are occluded by Nature firmly enough in four hours to prevent bleeding, when the splenic circulation is reestablished by removing the clamp. If the wounded splenic vessels are prevented from emptying themselves, which can be done by tamponing or suturing the wound, the thrombosis started at the splenic wounds extends to the clamp on the pedicle and prevents the reestablishment of the splenic circulation after the clamp has been removed

Archives of Pediatrics, New York

March

54 The Cutaneous Tuberculin Test. C. F. von Pirquet, Baltimore.
55 *The Stools of the New-Born Infant and Their Significance. T. S. Southworth, New York.
56 Pneumothorax: Clinical and Radiographic Study. F. Huber and I. S. Hirsch, New York.
57 Regulation of Fat Percentages in Infant Feeding. A. S. Bleyer, St. Louis.
58 Scarlet Fever Prophylaxis. R. M. Smith, Boston.

55. Abstracted in The Journal, July 10, 1909, p. 140.

Washington Medical Annals

March

59 Treatment of Postoperative Adhesions. A. L. Stavely, Washington, D. C.
60 Chronic Headache—Neurologic Advances Regarding its Diagnosis and Treatment. T. A. Williams, Washington, D. C.
61 *Gall-Stone Diabetes: Case and Specimen. W. P. Carr, Washington, D. C.
62 A Review in Therapeutics. N. P. Barnes, Washington, D. C.
63 Ulcer of the Duodenum: Case and Specimen. E. A. Balloch, Washington, D. C.
64 Sarcoma of Kidney in a Child Sixteen Months Old. J. R. Wellington, Washington, D. C.
65 Adenocarcinoma of the Transverse Colon: Obstruction: Resection to Cecum and Colon; Enteroanastomosis. E. A. Balloch, Washington, D. C.
66 *A Convenient Instrument for Ready Clinical Investigation of the Sensibility to Coolness and Warmth. T. A. Williams, Washington, D. C.
67 *Measles and Mice: Does the Microbe Come from the Mouse? A. F. A. King, Washington, D. C.
68 Cases of Gall-Stones. A. L. Stavely, Washington, D. C.
69 Case of Fatal Mastoiditis. W. K. Butler, Washington, D. C.
70 The General Practitioner and the Surgeon. W. A. Jack, Washington, D. C.

61. **Gall-Stone Diabetes.**—Carr urges that the occurrence of sugar in the urine should lead one to examine very carefully into the condition of the bile ducts and pancreas. In his case the diabetes was unquestionably due to a pancreatitis caused by pressure of a large gall-stone. The symptoms of gall-stone disease were typical, but antedated the operation only three months. At the operation the adhesions about the gall-bladder seemed to be at least a year or two old. There were many old and firm adhesions around the gall-bladder, especially between it and the greater omentum. The gall-bladder was distended with about 8 ounces of rather pale, ropy bile, and a single large gall-stone about the size and shape of an English walnut was found in the common duct. The head of the pancreas was slightly enlarged and somewhat harder than the body of the organ. Careful search was made for other causes of obstruction, but none were found. Bile did not flow into the glall-bladder for some time, but did flow pretty freely before the wound was closed. The stone was evidently formed by the amalgamation of a number of smaller stones, and must have required a long time to form and to work down into the common duct.

66. **Investigation of Sensibility to Temperature.**—*For estimating* degrees of sensibility, Williams employs an apparatus consisting of a cube of cast copper, 3 x 3 x 3 centimeters, tunneled out in the center to within 2 millimeters of the opposite surface. Into the tunnel is inserted the bulb of a thermometer of the kind used in storage warehouses. It registers from 10 to 140° F. The whole is mounted on a wooden holder along a groove in which the thermometer is embedded for protection. The scale is easy to read, as it lies in the furrow. For convenience of manufacture, the copper block is made in two equal parts, furrowed in such a way that the approximation of the grooves forms a circular tunnel for the thermometer. The two halves are clamped together with four copper screws; and the whole is in turn screwed to a strip of brass ⅛-inch thick and 3 centimeters wide. The brass fits along a beveled-cut surface of the block, which extends to within 2 millimeters of the foot. The brass strip is screwed also to the wooden handle which carries the thermometer scale, thus making the whole solid and giving a uniform surface of copper to place against the skin of the patient being examined. To use the instrument, it is plunged into a large jug of water at a temperature approximating to that desired, say 25 C. when testing for appreciation of coolness, or 40 C., when testing the appreciation of warmth. It is very easy, by adding cold water or hot water, to obtain any temperature desired in the large vessel; and this will remain practically constant long enough to enable a series of observations to be taken sufficiently complete for current clinical use.

67. **Measles and Mice.**—Numerous instances are on record in which measles seem to have originated from contact with straw. In recently investigating a supposed *de novo* case of measles in Washington it was found that the patient, a girl, got measles after playing in the loft of the White House stables (a mile or more from her home), where she had gone to play with the children (who had got the disease at the same time) of the stableman. The loft contained straw and hay, in which there was "any quantity of mice," so the stableman stated. King recalls that his brother and himself, when respectively 10 and 11 years of age, were attacked with measles after spending several hours helping kill mice on a wheat rick that was being taken into the barn and which was swarming with these rodents. There were no other measles cases among the neighbors and schoolmates. Some years ago, a box of china packed in straw was received in his own house. While unpacking it he could not get rid of the idea that there was measles in the straw. It was probably a subconscious olfactory impression, but so pronounced that, fearing his own children (who were then very young) might get the disease, he had the box and packing burned up without delay. His children escaped, but some days later it was learned that the relatives in whose house the china had been packed was in bed with measles. Many other similar incidents are cited which point to a possible etiologic relationship between mice and measles.

While the evidence thus presented in support of the etiologic relation between measles and mice is, for the most part only probable or presumptive, how, asks King, shall positive evidence be obtained by experiment? Hitherto the experimental production of measles artificially has been done by inoculation—by inoculating non-immunes with blood, mucus, tears, etc., taken form measles patients. But this is not the method by which the disease is naturally acquired. Measles is not produced by inoculating wounds, neither by the bites of insects nor by traumatism of any kind. The initial symptoms—cough, sneezing, coryza, sore throat, lacrimation, etc., all indicate infection by a spore-laden (probably in *de novo* cases, by a dust-laden) atmosphere. Thus, if we admit the mouse excreta to be the original source of measles it is easy to conceive that these excreta, when dried by the warmth of our houses, crushed by passing feet on the floor and dispersed by housemaids' brooms into the air, can in this way come in contact with the respiratory and other mucous surfaces.

King suggests that a sufficient quantity of intestinal concretions from the mouse should be reduced to fine powder, and then diffused through the air, to be inspired by non-immune children of a suitable age (not younger than 8 years). In a supposed *de novo* case recently investigated King found that the child got measles, without having been exposed to contagion by inhaling dust made by the mother sweeping out a very dusty cellar in a house she had just begun to occupy. At least this is the only available explanation of the case. It seems to be similar in origin to the cases produced by inhaling dust from mouse-infected wheat-ricks and stable straw mentioned in this paper.

Alabama Medical Journal, Birmingham

March

71 *The Physician—His Attitude Toward, and his Obligation to, his Patients, His Confrères, and to Himself. J. F. Alex-
72 P. Martin, Woodstock.
73 gra. C. M. Rudolph, Birmingham.
74 Cases: Their More Important Compli- [illegible] Successful Cesarean Section. W. A. Weed, Republic.
75 Supernumerary Uterus in a Girl Eighteen Years Old: *Removal*: Recovery. E. M. Robinson, Birmingham.

71. **The Doctor.**—The physician's attitude toward and his obligations to his patients, his confrères and to himself, are, in Alexander's opinion, somewhat as follows: To his patients.—The physician must hold himself in constant readiness to respond, fully equipped for emergencies, to calls to attend the injured or ill. He cannot be equipped with only pencil and a prescription pad. He must carry with him the instruments and medicines which may be urgently demanded. He must keep always before him the greatness of his mission and with a sense of the responsibilities he incurs when he proclaims himself a safe guide and counsellor. Visits should be made frequently enough to remain completely the master of the situation, as regards diagnosis, treatment and prognosis, but no visit should be made unnecessarily. The physician owes it to his patient to suggest improvements in his method of life and morals, and he can do this under the guise of professional advice so that the patient will never imagine that the advice is anything but medical. Physicians are frequently witnesses of injury to health and destruction of life by the nostrums and quack medicines so freely advertised and sold. It is their duty to warn their patients against the use of such "dope" and to explain to them why such preparations cannot be of universal service. The false and extravagant claims made for them should be denied and the reasons why they cannot perform the miraculous cures set forth in the "testimonials" should be made plain. The physician should inform himself, so far as possible, on the constituents of such nostrums, so that he may be able to combat intelligently the prejudices of his patients, who have been hypnotized by the startling language of the advertisement and the false records of cures.

To his confrères.—The medical profession, because of the circumstances surrounding the practice of medicine, has developed a special set of rules for the government of their fellowship, and this has been called the Principles of Medical Ethics. If all complied with the simple precepts there outlined, there would be no injustice, no malice, no jealousy, no envy, no hatred, no heart aches; for all men would be truly brothers, who would perish before they would work or think a wrong toward others. This code is merely the golden rule, amplified and adapted to the vicissitudes and perplexing situations so common in the practice of medicine.

The physician's attitude toward, and his obligations to himself.—Too many of us live and work as if our minds and bodies had no rights which we were bound to respect. Disciples of Æsculapius and votaries of Hygeia, we preach their precepts to the laity, but disdain and violate fundamental rules in our daily conduct and every-day life. We have no regular hours for meals, rest, recreation or sleep; we continue our exertions many times when mentally and physically exhausted; we endure all the exposure the country farmer or laboring man undergoes, and generally without adequate clothing; we are careless in collecting the fees we have earned through such privations. We owe a duty to ourselves in the matter of observance of the rules of health. The privations and hardships of the most arduous and exacting practice can be mollified, if we but appreciate this egoistic duty and plan to fulfil it. The physician cannot afford to be ill.

Maryland Medical Journal, Baltimore

April

76 *Diagnosis and Treatment of Tuberculous Peritonitis. R. Winslow, Baltimore.
77 John Hunter (1728-1821). H. M. Cohen, Baltimore.
78 Malpighi and His Writings. W. R. Stokes, Baltimore.
79 *State Boards and High Entrance Requirements. H. Harlan, Baltimore.

76. **Tuberculous Peritonitis.**—While some patients with tuberculous peritonitis undoubtedly recover without surgical intervention, Winslow believes that there is always the doubt as to the correctness of the diagnosis. Not all cases are appropriate for surgical operation, but great benefit and permanent cure follows laparotomy in at least 50 per cent. of suitable cases. The cases in which there is free fluid in the peritoneal sac, with little or no evidence of disease elsewhere, are best treated by surgical methods; the adhesive forms sometimes are cured by laparotomy, but in a much smaller proportion of cases. After the patient has been subjected to surgical treatment, all other measures of a hygienic, climatic and medicinal character that have been found useful in pulmonary tuberculosis should be employed.

79. Abstracted in THE JOURNAL April 16, 1910, p. 1332.

American Medicine, New York

March

80 Why we are What we are—The Proper Function of the Medical Society. R. W. Wilcox, New York.
81 The Eloquence of Infancy. L. Kerr, Brooklyn.
82 Points of Importance in the Performance of Vaginal Fixation. S. W. Bandler.
83 Acute Infective Osteomyelitis. D. C. Hilton, Lincoln, Neb.
84 Successful Cases of Puerperal Eclampsia. R. E. Coughlin, Brooklyn.

American Journal of Urology, New York

March

85 Stricture of the Male Urethra: Dilatation as a Means of Treatment. V. C. Pedersen, New York.
86 Etiology and Symptomatology of Chronic Prostatitis: Report of 521 Cases [illegible] Analysis of 1,788 Cases. H. A. Moore, [illegible]
87 Persistence of Urinary Fistula in two Cases in which it was Thought that the Whole Kidney had been Removed by Nephrectomy. F. S. Watson, Boston.

Atlanta Journal-Record of Medicine

March

88 The Physician's Duty to the Public. J. G. Palmer, Opelika, Ala.
89 Postoperative Ileus and its Treatment. W. L. Cooke, Columbus.
90 Use and Abuse of Specific Treatment in Tuberculosis. L. C. Rouglin, Atlanta.
91 Tonsillectomy. H. M. Lokey, Atlanta.
92 The Pathology and Surgical Treatment of Cholelithiasis. H. S. Bruce, Opelika.

Pennsylvania Medical Journal, Athens

March

93 *Modern Operations for the Cure of Inguinal and Femoral Hernia. J. H. Gibbon, Philadelphia.
94 Umbilical and Postoperative Hernias. J. J. Buchanan, Pittsburg.
95 *Conservative Surgery in Ocular Injuries. L. W. Fox, Philadelphia.
96 *The Futility of Administering Antirheumatic Remedies in Patients Suffering from Painful Joints. H. R. M. Landis and C. Muschlitz, Philadelphia.
97 *Joint Diseases versus Rheumatism. DeF. Willard, Philadelphia.
98 Presenile Syphilitic Cataract. E. Stieren, Pittsburg.
99 Patent Thyrolingual Duct and its Diseases: Use of X-Rays. J. H. Comroe, York.

93. **Modern Operations for Inguinal and Femoral Hernia.**—Gibbon is of the opinion that the Bassini operation is now the most universally employed operation for hernia. Among the recent improvements should be mentioned the overlapping of the facial layers, as suggested by E. Wyllys Andrews. In old people, in whom the muscles are attenuated and the hernial opening large, this overlapping is necessary. The Ferguson method has the advantage of being of simpler performance, and requiring less time than the Bassini operation. It is particularly useful in cases of strangulated hernia and in cases complicated by an undescended testis. Important in any operation for hernia is the complete removal of the sac; failure to do this is responsible for many recurrences. The separation of the sac from the cord is best accomplished by first opening the sac. Iodized or chromicized catgut, Gibbons believes, is the best suture material. In operating for inguinal hernia on the right side the appendix can, as a rule, be removed easily and in children especially, he states, is a good practice. Direct hernia is much more difficult to cure than the oblique variety. The Bloodgood method of transplanting the sheath of the rectus gives the best results. The secret of success for femoral hernia lies in the complete removal of the sac rather than the method of closing the femoral canal. Infiltration anesthesia he considers particularly useful in cases in which a general anesthetic is contraindicated, and in cases of strangulated hernia. No truss should be worn after an operation for the cure of hernia, unless there is evidence of recurrence.

95. Abstracted in The Journal, Nov. 6, 1909, p. 1590.

96. Published in the *Therapeutic Gazette*, March, 1900.

97. Abstracted in The Journal, Nov. 13, 1909, p. 1672.

Medical Herald, St. Joseph, Mo.

March

100 *The Bacteriologic Diagnosis of Epidemic Cerebrospinal Meningitis. S. R. Hopkins, Omaha.
101 *Scientific Feeding. M. A. McLintock, Atchison, Kan.
102 The Neglected Anus. D. T. Quigley, North Platte, Neb.
103 *Does the Present Conservatism in Pelvic Surgery Serve the Best Interest of the Patient? B. A. McDermott, Omaha.
104 The Objects of Mechanical and Surgical Treatment of Infantile Paralysis. H. W. Orr, Lincoln, Neb.
105 Borderland Mental Cases. C. R. Woodson, St. Joseph.
106 Treatment of Chronic Nephritis with Sodium Carbonate and Uremic Convulsions with Calcium. C. F. d'J. A. Francis, Brooklyn.

100, 101, 103. Abstracted in The Journal, Oct. 2, 1909, pp. 1127, 1128.

Cleveland Medical Journal

April

107 Traumatic Neuroses from a Medical Point of View. A. Church, Chicago.
108 The Pharmacopeia and its Revision. J. P. Remington, Philadelphia
109 The Coming Revision of the U. S. Pharmacopeia. T. Sollmann, Cleveland.
110 Care of Children after an Operation on the Tonsils and Adenoid Tissue. J. M. Ingersoll, Cleveland.
111 *Normal Saline Solution as a Dressing in Casualty Surgery. G. E. Follansbee, Cleveland.
112 Transfusions. H. G. Sloan, Cleveland.

111. **Saline Solution in Surgery.**—Follansbee compares the results in 1,000 consecutive cases of cuts, lacerations and crushing injuries treated antiseptically by means of 1 to 2,000 bichlorid solution, and 1,000 consecutive cases of the same nature treated physiologically by normal saline solution. The instances of prolonged disability, of deformity and death due to infection in the series treated antiseptically were much in excess of those in the series treated physiologically. The number of secondary operations such as amputations and opening infections became noticeably less, although Follansbee has successfully attempted to save crushed fingers and toes that under the usual antiseptic treatment would have been lost. The number of cases which healed by primary union even in lacerations and crushes was markedly increased, although Follansbee's records are not sufficiently minute for him to venture on percentages. He finds it a most satisfactory dressing whenever it is desirable to promote healing in open wounds such as burns, ulcers, abscesses after wide incision, skingrafts, etc.

The manner of using is to keep the dressing saturated, preferably by dipping the injured part into a bowl of the solution. As the water evaporates from the dressing the salt is left, and if it is continually dipped and dried there is a great excess of salt which is liable to cause a dermatitis and to interrupt healing. To avoid this, it is only necessary to direct the patient to use pure water alternately with the solution. In the 1,000 cases of the bichlorid series there were 21 cases in which, on account of infection which developed, the period of disability suffered by the men was materially increased over what it should have been had no infection taken place, and in several cases deformity in the way of contractures or of loss of members resulted. There were also two cases of death following infection.

Ophthalmic Record, Chicago

March

113 Glioma Retinæ. E. Stieren, Pittsburg.
114 Osseous Tumor of the Orbit. H. F. Hansell, Philadelphia.
115 Toxic Amblyopia of Diabetic Origin Occurring in a Young Woman—A Rare Symptom of the Toxemia of Diabetes. W. Reber, Philadelphia.
116 Transplantation of Fat into Tenon's Capsule after Enucleation. A. N. Alling, New Haven, Conn.
117 A New Device for Suspending the Giant Magnet. S. J. Torney, Bellingham, Wash.
118 Orbital Fibroma: Unusual Clinical Manifestations. G. O. Ring, Philadelphia.
119 The Use of a Mass of Fatty Tissue as a Stump in *Ocular* Prothesis. A. E. Hershoff, Cleveland.
120 Psychoses Associated with Ocular Affections. S. D. Risley, Philadelphia.
121 Unusual Forms of Congenital Cataracts. W. C. Posey, Philadelphia.

Woman's Medical Journal, Cincinnati

March

122 Pregnancy as a Causal Factor in Enteroptosis. R. Moore, Rochester.
123 The Conservation of Manhood and Womanhood. E. W. Young, Boston.
124 Preventive Dentistry. A. S. Worthen, Boston.
125 The Importance of Vertigo in Symptomatology. M. L. Hurrell, Rochester.
126 Hygiene of Pregnancy. G. L. Broadhead, New York.
127 Postgraduate Medical Work for Women in Europe. M. S. Macy, New York.

American Journal of Physiology, Boston

April

128 Control Tests of a Respiration Calorimeter. F. G. Benedict, J. A. Riche and L. E. Emmes, Boston.
129 Comparison of the Direct and Indirect Determination of Oxygen Consumed by Man. F. G. Benedict.
130 The Mechanism of the Depressor Action of Dog's Urine: The Antagonistic Action of Adrenalin. R. M. Pearce and A. B. Eisenbrey, New York.
131 *The Internal Secretion of the Thyroid. A. J. Carlson and A. Woelfel, Chicago.
132 Physiology of Lymph—Methods of Inducing the Appearance of Polymorphonuclear Leucocytes in the Lymph. J. R. Green, Chicago.
133 Effect of Thyroidectomy on the Development of Active Immunity in Rabbits. C. A. Fjeldstad, Chicago.
134 Metabolism of Some Pyrimidin Derivatives. L. B. Mendel and V. C. Myers, New Haven, Conn.
135 *Physiology of Cell Division—Action of Isotonic Solutions of Neutral Salts on Unfertilized Eggs of Asterias and Arbacia. R. S. Lillie, Woods Hole, Mass.

136 *Metabolism of Development—Energy Metabolism in the Pregnant Dog. J. R. Murlin, New York.
137 Influence of Increase of Alveolar Tension of Oxygen on the Respiratory Rate and the Volume of Air Respired while Breathing a Confined Volume of Air. T. Hough, Charlottesville, Va.
138 Relation of Ptyalin Concentration to the Diet and to the Rate of Secretion of the Saliva. A. J. Carlson and A. L. Crittenden, Chicago.
139 Action of Extracts of the Anterior Lobe of the Pituitary Gland on the Blood-Pressure. W. W. Hambridge, Chicago.

131. **Internal Secretion of the Thyroid.**—Carlson and Woelfel investigated the nature of the thyroid lymph which they found did not differ materially from the neck or thoracic lymph. It did not contain iodin in appreciable quantities. Intravenous injection of thyroid lymph had no specific effects on the circulation. Complete elimination of thyroid and parathyroid lymph for from 36 to 48 hours in normal foxes does not induce the symptoms of thyroid-parathyroidectomy. While the feeding of thyroid preparations to mice poisoned with acetonitrile after the method of Hunt confirmed the results of Hunt that the poison was neutralized by the thyroid preparation, the thoracic lymph produced no such effect. Investigations of goitrous dogs showed that the iodin content of the thyroids is extremely variable. Iodin may not be present in detectable quantities in the thyroids of dogs which to all appearance are normal animals. Dogs with active thyroid hyperplasia according to histologic criteria, so far as found in the lake region, appear to be normal except the goiter, and exhibit none of the symptoms of exophthalmic goiter. Evidence is cited, showing: (1) that the thyroid may assume parathyroid structure and function and *vice versa*, and (2) that there is in all probability both a qualitative and quantitative difference in function of the thyroid and parathyroid under normal conditions. Evidence is also produced showing that both thyroid and parathyroid perform their functions with or without colloid or iodin in the glands; and that the present hypotheses concerning the relation of the colloid to the specific thyroid and parathyroid activities have little or no basis in fact. The colloid is peculiar in that it is an intercellular deposit. After remaining in the gland for a time it appears to be taken up by the same cells that secreted it and returned to the blood, but not to pass into the lymphatics. The authors favor the detoxication hypothesis of Cyon as explaining the fixation of iodin in the thyroid, that organ acting as a special filter to retain iodin which would otherwise be toxic to the organism. The iodin may be deposited in connection with or without colloid. The iodin absorbing power appears to be a function of the thyroid in a special degree and is not exhibited by the colloid of other organs.

135. **Physiology of Cell Division.**—Cell division as the first step in development is initiated by a number of agents such as sodium salts with various acids which Lillie finds are agents capable of increasing the permeability of the plasma membrane so that osmotic interchange occurs with a loss of some of the essential constituents of the cell. If this influence is carried too far there is an irreparable loss of material and death of the cell ensues. If the disintegrating influence be stopped at the right point the metabolic changes result in the initiation of the developmental process which may proceed as far as the blastula stage in the case of unfertilized *Arbacia* eggs. The permeability of the plasma membrane was shown by the escape of pigment. The salts of the same metal differ in their rate of action in the following order for sodium salts: sodium chlorid, sodium bromid, sodium nitrate, sodium sulphocyanate, sodium iodid. Potassium salts have a more gradual effect of the same kind and show the same general order of relative activity. The effect in initiating cell division is in the same order which is also the order of relative toxicity. A contrast is seen between the irreversible character of the death process which depends on increase of permeability and the reversibility of anesthesia in which activity ceases because normal permeability is decreased and in which the material of the cell is preserved and metabolic activity is resumed when the permeability becomes normal.

136. **Metabolism in Pregnancy.**—Murlin sums up the evidence to date regarding metabolism of the fetus as follows: 1. The energy metabolism of the embryo is greater per unit of weight than that of the mother. 2. This energy is derived in oviparous animals almost entirely from fat and in viviparous animals almost exclusively from carbohydrates.

From his own experiments on pregnant dogs he concludes as follows:

1. In a dog pregnant with only one embryo the increase in the total energy production due to pregnancy was not evident until the sixth week of gestation. Between the sixth and the eighth weeks an increase of 9 per cent. was observed.

2. The total energy production due to pregnancy, measured by the indirect method 3 days before parturition (in 2 different pregnancies in the same dog), proved to be proportional to the weight of the offspring at birth.

3. The extra energy production near the end of pregnancy is very nearly equal to the energy requirement of the new-born, when calculated according to Rubner's law of skin area.

4. The extra energy production of mother and offspring the first day after parturition is from 2 (5 puppies) to 3 (1 puppy) times the extra energy production of pregnancy 3 days before parturition

Journal of Advanced Therapeutics, New York

March

140 The Rôle of Physical Therapeutics in the Treatment of Infection. W. B. Snow, New York.
141 Roentgenology for the General Practitioner: Its Limitations: Notes on Technic. D. R. Bowen, Rome, N. Y.
142 *Controlling the Spark Gap of a Static Machine.* G. S. White, Yonkers, N. Y.

Journal of Ophthalmology and Oto-Laryngology, Chicago

March

143 The Effect of the Electric Headlight on the Vision of Engineers. A. H. Andrews, Chicago.
144 The Sensory System of the Facial Nerve and its Symptomatology. J. R. Hunt, New York.

American Journal of Public Hygiene, Boston

February

145 An Epidemic of Probable Paratyphoid Fever. A. W. Freeman and H. T. Marshall, Charlottesville, Va.
146 Control of Typhoid in the City and Country: Description of a Modified Hesse's Medium for the Detection of Typhoid Bacillus in Excreta and Fluid Foods. W. R. Stokes and F. W. Hachtel, Baltimore.
147 *Management of Milk-Borne Outbreaks of Typhoid. C. V. Chapin, Providence, R. I.
148 *Relation of Typhoid* to the Water Supplies of Illinois. E. Bartow, Chicago.
149 Utility of the Domiciliary Visit in the Campaign against Yellow Fever. C. M. Garcia, Vera Cruz, Mexico.
150 *The Campaign against Yellow Fever on the Isthmus of Tehuantepec. F. Valenzuela, Mexico City.
151 *Yellow Fever in the Mexican Republic (Aug. 16, 1908, to date). E.
152 Limited Outb   Double Water Supply. A. J. Doug
153 Methods of   Disease by Boards of Health in Small Communities. F. G. Curtis, Newton, Mass.
154 Prevention of the Spread of Contagious Diseases, Particularly Among Children. A. S. Fell, Trenton, N. J.
155 The Tuberculin Test as Applied to a City's Milk Supply. G. W. Goler, Rochester, N. Y.
156 The Clean Milk Campaign in Hamilton, Ont. G. Steinmetz, Hamilton, Ont., Canada.
157 The Importance of Population Vital Statistics and their Treatment Actuarially. M. M. Dawson, Washington, D. C.
158 American Birth Registration. F. C. Gram, Buffalo.
159 The Budapest System of Death Classification. F. L. Hoffman, Newark, N. J.
160 Trade Mortality Statistics. F. L. Hoffman, Newark, N. J.
161 Smallpox in the United States. J. W. Trask, U. S. P. H. and M.-H. S.
162 *Insanity in Immigrants.* P. H. Bryce, Ottawa, Canada.
163 An Improved Bubbling Drinking Fountain. S. C. Keith, Boston.
164 Importance of Registration and Control of Cases of Laryngeal and Pulmonary Tuberculosis. D. D. Brough, Boston.
165 Ophthalmia Neonatorum: Facts Concerning the Disease and its Prevention as Affecting Massachusetts. M. W. Richardson, Boston.
166 Personal Hygiene. P. Stiles, Boston.
167 Veterinary Hygiene. W. L. Beebe, St. Paul.
168 Municipal Sanitation. C. V. Chapin, Providence, R. I.

147, 150. Abstracted in THE JOURNAL, Nov. 20, 1909, p. 1762.

151. Abstracted in THE JOURNAL, Nov. 27, 1909, p. 1844.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

April 2

1 *The Localization of Cerebral Function, based on the Clinicopathologic Study of Mental Disease. J. S. Bolton.
2 Failure of Nerve Anastomosis in Infantile Paralysis. W. R. Warrington and R. W. Murray.
3 *An Anatomic Inquiry into the Pathway of Tuberculous Infection. F. W. Jones.
4 Rupture of the Tunica Vaginalis in Hydroceles. S. Hastings.
5 The Wassermann Reaction from a Practical Point of View. J. E. R. McDonagh.
6 *Tetanus Treated with Subcutaneous Injections of Magnesium Sulphate: Recovery. P. Paterson.

7 Hemorrhage Following Gastroenterostomy with Clamps. R. Ollerenshaw.
8 The Circulatory System (continued). H. Campbell.

1. **Localization of Cerebral Function.**—This is the first of the Goulstonian lectures. Bolton discusses the normal mode of evolution of the lamination of the cortex. He says that he purposes demonstrating that the essential physical basis of mental disease consists, on the one hand, in an imperfect development of the cell cortex, which is of the nature of a true sub-evolution or dissolution, since such decrease in depth takes place in the converse order to that in which the cell laminæ are developed during the process of normal growth.

3. **Pathway of Tuberculous Infection.**—Jones believes that his investigations point to the fact that with increasing age the abdominal lymphatics become more constricted, and the lymph circulation becomes more centered on the thoracic ducts. If some such process takes place, it would offer a ready explanation for the different sites of tuberculous infection in childhood and in adult life. If the mesenteric lymphatics most readily carry China ink (and tubercle bacilli) in children, the advent of tuberculous peritonitis is not difficult of explanation; and if the lymphatics of the diaphragm readily carry infection to the thorax in children, then basal phthisis is easily explained. Evidence of some such change would appear to be seen in the waning of lymphoid structures when the processes of growth have been carried out; for in the adult an atrophy of lymphoid tissues, and probably of the lymph channels, take place. At the period of life when bodily growth is complete it is not impossible that, with the atrophy of lymphatic structures the lymph stream becomes more dependent on the thoracic ducts, and this is the time of life when apical phthisis is most prone to occur. If the route of the thoracic duct should chance to be that by which the tubercle bacilli reach the lung in phthisis, and the spine in Pott's disease, it becomes a matter of importance to see if there is any symptom that might seem to point to an involvement of the duct. Of primary disease of the duct nothing seems to be known.

6. **Tetanus Treated with Magnesium Sulphate.**—Three weeks after he had received a small wound on the scalp from a kick, Paterson's patient developed tetanus. When brought under observation the whole body was rigid, with the exception of the forearms and hands. Opisthotonos was well marked; the legs could not be moved, and the incisor teeth could be separated for about an eighth of an inch only. All the affected muscles were very hard. He complained of severe and continuous pain across the upper part of the abdomen and down both legs. Superadded to the tonic contractions of the muscles there were almost continuous cramp-like spasms. Every two or three hours these became very severe, and implicated not only the muscles of the trunk and limbs, but also those of respiration, so that breathing was suspended, the face became cyanosed, the pupils dilated, the pulse thready, and occasionally consciousness was lost.

The following day the man received a subcutaneous injection of 10 c.c. of a 10 per cent. sterilized solution of magnesium sulphate, 5 c.c. being introduced into each thigh. Soon after this injection he obtained an hour's sleep, the first he had had for 48 hours. These injections were repeated every four hours, night and day, for 2 days. The comparatively slight and more frequent spasms had disappeared almost entirely, the pain had become much less acute and the severe spasms had become less frequent. As these were still so severe as to threaten life, however, the dose of the magnesium sulphate solution was rapidly increased till 20 c.c. were administered at one time, 10 c.c. being injected into 2 separate parts of the body at one time. This increased dose was repeated every 4 hours and continued for 4 days. The effect of this treatment seemed to be a prolongation of the interval between the spasms, there now being only one, or at most two, in the 24 hours. The rigidity of the jaws, abdomen and back was still present, but that of the legs was passing off, as he was able to draw them up in bed, though with difficulty. The injections were then stopped. The patient left the hospital 5 weeks after admission.

British Medical Journal, London

April 2

9 Four Cases in Which Stones were Removed from the Ureter. C. A. Morton.
10 Some Idiopathic Diseases of the Skin which may Simulate Syphilis. P. S. Abraham.
11 Rupture of the Bladder Followed by Gangrene of the Bladder Walls. P. C. Fenwick.
12 *Double Loop Hernia. J. A. C. Macewen.
13 *Gluteal Aneurism. W. B. Secretan.
14 Amputation for Diabetic Gangrene. A. E. Johnson.
15 Epilepsy. W. A. Turner.

12. **Double Loop Hernia.**—The case cited by Macewen was one of left femoral hernia and only one loop was strangulated. The probable period of strangulation in this case was a long one—not less than 5 days—from which, together with the condition of the bowel as found at the operation, it may be inferred that the strangulation was not complete, but was more of the nature of an obstruction of the lumen of the bowel than of marked interference with the blood supply of the affected loop. It is a question whether the loop became strangulated immediately on entering the sac or whether it had been present for some time previous, as the history of the sac, increasing markedly in size, seemed to suggest. As the loop was perfectly free in the sac, and there was not even a constricting band at the neck, Macewen is inclined to think that the loop had become strangulated immediately on its entrance into the sac 5 days previously.

13. **Gluteal Aneurisms.**—In Secretan's case a tense pulsating tumor was present in the right gluteal region. The pulsations were expansile, and a marked thrill could be detected at one point. Auscultation revealed a loud bruit. The center of the swelling was situated above and a little to the outer side of the point of junction of the middle and lower thirds of a line drawn from the posterior superior iliac spine to the ischium. The tumor extended down to the gluteal fold, which was almost obliterated, and, apparently, deeply into the pelvis. Owing to the severe pain and the possibility of rupture of the aneurism, Secretan tied the internal iliac artery. Four weeks later the aneurism could still be felt to pulsate, but not markedly. It was smaller than before the operation and felt rather hard.

Medical Press and Circular, London

March 23

16 Idiocy and Allied Conditions in Children. T. R. Whipham.
17 Acute Prostatic Abscess. V. Wall.
18 Flatulence and its Treatment. L. Boas.
19 Traumatic Neurosis Illustrating Successful Psychotherapy. T. A. Williams.

March 30

20 Idiocy and Allied Conditions in Children (continued). T. R. Whipham.
21 *The Physicotherapy of Sciatica. M. Orb.
22 *Administration of Ether by the Purely Open Method. R. H. Hodgson.
23 The Assimilation of Carbohydrates in Health and Disease. S. A. Arany.

21. **Physicotherapy of Sciatica.**—Orb favors the application of dry cupping glasses which the patients themselves can use, so that the application may be frequently repeated. He has seen good results in acute cases from wet packs on the hip and leg made with linen or silk bandages, wrung out in water of 60 to 70 degrees and covered with a double layer of flannel. Orb does not employ massage in the acute cases as the hard pressure often employed by masseurs may considerably increase the pains. But very light friction carefully applied by the physician himself, avoiding the most painful spots, is sometimes very useful.

Electrotherapy he does not apply very often; when he uses it he gives the galvanic current in acute and chronic cases, using 2 equal-sized electrodes, 10 square inches in area, the negative on the abdomen, the positive on the posterior iliac spine or the sciatic notch, moving both evenly along the leg without interruption of the current.

While the application of physical methods of treatment is limited in the acutest cases of sciatica, it has ample scope, he says, in the sub-acute and chronic cases. In these cases, massage is used most frequently. It is necessary to employ very light massage at the beginning of a course of treatment in order to avoid unnecessary and undesirable pains

As improvement takes place, massage may be more energetic. Then *tapôtement*, intermittent pressure, and vibrations over the sciatic notch and the other painful spots are useful. Vibratory massage will very often be found successful. It is not advisable to give massage for longer than 15 minutes daily in sciatic cases. Once the pain is lessening, Orb recommends gymnastics, and exercises which induce a nonsurgical stretching of the sciatic nerve. Hydrotherapy is no less useful than other methods—the steam douche, the hot water spray, and the Scotch douche. Hot sitz baths are contraindicated, as the overflexing of the thigh during such a bath increases the pain.

22. **Administration of Ether by the Open Method.**—Hodgson depicts a new apparatus but unfortunately does not give a description of it. He claims that all the air breathed must first pass through drugs; no second breathing of the same air can take place. The quantity of ether necessary for a long operation is small—2 or 3 ounces. The patient feels but little sensation of suffocation. There is practically no struggling going under or coming to, and no fear of hemorrhage. The lungs and bronchial tubes are not choked by viscid mucus. The after-complications of ether administration do not arise. There are no sponges or other media liable to become foul or to accelerate freezing.

Journal of Tropical Medicine and Hygiene, London

March 15

24 Ascites with Enlargement of the Liver, Occurring in Nyasaland. R. Howard.
25 Symptoms and Treatment of Localized Bilharziosis of the Large Intestine. F. C. Madden.
26 Operative Treatment of Bilharziosis of the Large Intestine. O. Richards.
27 Campaign against Bubonic Plague in Ground Squirrels (*Citellus Beechey*) in California. W. C. Rucker.

Annals of Tropical Medicine and Parasitology, Liverpool

March

28 *Life History of *Trypanosoma Lewisi* in the Rat-Louse (*Hæmatopinus Spinulosus*). A. Breinl and E. Hindle.
29 *Variation of the Hemolytic Complement in Experimental Trypanosomiasis. W. Yorke.
30 *Acute Craw-Craw. R. H. Kennan.
31 Prevalence of Mosquitoes in Cairo and its Environs. F. C. Willcocks.
32 Effect of Mosquito Larvæ on Drinking Water. R. Boyce and F. C. Lewis.

28. **Life History of Trypanosoma Lewisi.**—Breinl and Hindle have succeeded in transmitting *Trypanosoma lewisi* by means of *Hæmatopinus spinulosus*, and, with the aid of wet fixation methods, in modifying conclusions which have previously been drawn concerning the cytologic characters of this parasite in specimens stained by Romanowsky. In three of their experiments they have been able to transmit *Trypanosoma lewisi* by means of the rat louse. They usually collected well-fed lice from a heavily infected rat, and transferred them, after an interval of 20 hours, to a normal rat. In one experiment 24, and in the other 2 experiments, 40 lice were used. In the first 2 cases parasites appeared in the peripheral blood after an incubation period of 8 days, and in the third after 10 days. In each case the animal developed a typical infection. In two further experiments 10 lice were used after having been kept for two days in test tubes, but in neither did an infection result, although the animals were kept under observation for a considerable period.

29. **Variation of Hemolytic Complement in Experimental Trypanosomiasis.**—Results obtained by Yorke confirm those of Hartoch and Yakimoff, that in most cases of experimental trypanosomiasis, a marked diminution or total disappearance of the hemolytic complement can be observed for a few hours before the animal's death. This decrease of the hemolytic complement is limited to the last stages of the diseases, and is not met with in the earlier stages even when the blood is swarming with trypanosomes. The serum of an animal in the last stages of the disease at a time when it contains no hemolytic complement, has no inhibitory effect on the activating power of the complement of normal serum. The presence of numerous trypanosomes in the blood causes of itself no diminution of the hemolytic complement, and secondly it is not possible to absorb, *in vitro*, the complement from normal serum by the addition of numerous trypanosomes.

30. **Acute Craw-Craw.**—The term "craw-craw" is applied extensively in West Africa to describe pathologic conditions of the skin which are mainly characterized by the presence of a papulo-vesicular eruption, accompanied by more or less itching. Generally, this rash is most marked about the buttocks, perineum, genitals, and groins, and is most commonly seen in a condition which seems to indicate chronicity, *viz.*, scale formation, and hypertrophy. The rash is vesicular in the very early stage. The vesicles have very little, if any, papular foundation. Pricking the vesicle in the early stage allows exit of a sticky, pellucid fluid, and the vesicle can be entirely emptied by slight pressure without further rupture of its walls, leaving the latter collapsed. A day or so after the first outbreak of vesicles, fresh vesicles are formed between the older ones, and fresh spots continue to appear for a week or so. A few of the spots suppurate slightly, but definite adherent scabs are rare. A vesicle may show umbilication when a fine hair emerges from its center. The temperature is raised early and before any suppuration has appeared, and there is no "secondary" fever. Constitutional symptoms are definite but slight, and no more than would be expected to accompany the moderate degree of fever usually present (100 to 102 F.), and which lasts for a few days only. Itching is not generally a marked symptom, and is usually not present till the later stage; it is rarely intense, and it usually ceases before the rash has entirely disappeared.

Disappearance of the rash with desquamation of the epidermis of the affected parts is slow and protracted, and even with frequent bathing and friction the skin may still show signs of the rash for a month or six weeks, or even longer. No pitting or discoloration is found afterward. The mucous membranes are not usually affected. The progress of vaccination is not influenced by the disease.

Australian Medical Journal, Melbourne

February

33 Work of the Ballarat Division of the British Medical Association. R. Scott.
34 Treatment of Gastroenteritis. H. D. Stephens.
35 Muscular Function. W. Mackenzie.
36 Anuria Lasting Nine Days—Nephrotomy. H. G. Loughran.
37 Impressions of Surgical Work in Great Britain and America. D. M. Morton.

Annales de l'Institut Pasteur, Paris

February, XXIV, No. 2, pp. 81-160

38 Further Research on Infection from the *Trypanosoma congolense*. A. Laveran.
39 Serotherapy of Meningitis. (La sérotherapie antiméningococcique.) C. Dopter.
40 Experimental Diphtheria in the Chimpanzee. E. Burnet.
41 Spontaneous and Experimental Mouse Cancer. (Quelques recherches sur le cancer spontané et le cancer expérimental des souris.) L. Nègre.
42 Intracorpuscular Phases of Trypanosomes. (Stades endoglobulaires des trypanosomes.) A. Carini.
43 Parasites Resembling Bacilli Found in the Red Corpuscles of Brazilian Frog. (Sur quelques parasites semblables à des bacilles rencontrés dans les hématies du *Leptodactylus ocellatus*. A. Carini.
44 A Fungus Causing Spontaneous Tuberculoid Lesions in Brazilian Frog. (Sur une moisissure qui cause une maladie spontanée du *Leptodactylus pentadactylus*. A. Carini.

Annales des Mal. des Org. Génito-urinaires, Paris

March, XXVIII, No. 5, pp. 385-480

45 Paravaginal Pachyvaginalitis Following Trauma of Scrotum. G. Chavannaz and L. P. Nadal.

Annales de Médecine et Chirurgie Infantiles, Paris

March 15, XIV, No. 6, pp. 181-216

46 *The Daily Ration in Infant Feeding. (Quelques indications pratiques concernant la ration alimentaire du nourrisson.) Périer and Gaujoux.
47 Defective Development without Rachitis in Case of Tuberculosis. (Hypotrophie sans rachitisme dans un cas de tuberculose.) L. Tixier.
48 *Chronic Appendicitis. A. Schwartz.
49 Importance of Examination of Cerebrospinal Fluid in Diagnosis and Treatment of Meningitis. L. Bousquet and W. Mestrezat.

46. **The Daily Ration in Infant Feeding.**—Périer and Gaujoux give several tables for practical determination of the amount of milk best adapted for the individual child at each feeding and during the twenty-four hours; the child is weighed before and after each feeding and the average computed for the twenty-four hours. During the first 7 days the amount taken should increase on an average by 10 gm. (about one-third of an ounce) a day; during the first 5 months by an

average of 10 gm. a month, after which the increase is more gradual. Terrien's rule is to estimate the proper amount of milk by multiplying by 2 the first two figures of the child's weight in kilograms. Apert's rule is that the daily ration in grams should be exactly one-tenth of its weight in kilograms, plus 200 grams (A). The amount of each feeding should be one-fiftieth of its weight (B), and the number of feedings should be computed by dividing the first, A, by the second, B. Variot's rule is to compute the daily ration by multiplying by 15 the height of the child in centimeters (1 cm. equals 3/8 inch; 1 kilogram, 2 1/5 pounds).

48. **Chronic Appendicitis.**—Schwartz describes some of the forms that unsuspected chronic appendicitis may assume. In one case a boy of 12 had no appetite and for years had to be coaxed to eat even one or two rolls during the day. There were no symptoms and the mother applied to the physician merely on account of this chronic lack of appetite. Examination revealed some tenderness in the right iliac fossa and on the diagnosis of chronic appendicitis the appendix was removed. The boy developed appetite at once and conditions have since been normal. In another case a young man had recurring attacks of vomiting for several hours every two or three months but with no other symptoms, the digestion being apparently good. Nothing abnormal was found except that the large intestine was distended and thickened but nowhere tender. At last one of the attacks of vomiting was accompanied by signs of acute appendicitis and a small abscess was found in the appendix. Since its removal there has been no return of the attacks.

Bulletin de l'Académie de Médecine, Paris

March 1, LXXIV, No. 8, pp. 213-244

50 *Ectopia of the Heart. (Volumineuse hernie sus-ombilicale avec ectopie cardiaque.) M. Kirmisson.
51 Pathogenesis of Senile Cataract. H. Frenkel and A. Weiss.
52 *Proper Diet in Kidney Disease. G. Linossier and G. H. Lemoine.

March 22, No. 11, pp. 293-322

53 Graft of Muscle Tissue to Fill Cavity Left after Operative Treatment of Osteomyelitis in Clavicle or Tibia. Nélaton and E. Kirmisson.
54 Special Features of Arthritic Diathesis. Sir Dyce Duckworth and Chauffard.

50. **Displacement of the Heart Outside of the Thorax.**—Kirmisson reports a case in which a child was born with a large tumor just above the umbilicus, formed by a hernia, and another tumor also on the median line above which proved to be the displaced apex of the heart. The findings in this case are identical with those in a case reported by Vaquez and Foy in which the patient, a farmer, lived to be 37 years years old. In both cases the sternum was split into two parts and the apex of the heart presented in the cleft. Kirmisson was able to find only 2 other cases like these in the literature, but Lannelongue has a patient in good health to date on whom he operated 22 years ago, 14 days after birth. The apex of the heart in this case protruded through the cleft in the upper part of the sternum and through a gap in the skin. The ring of skin around the heart began to constrict that organ and consequently Lannelongue pushed the heart back into the thorax and covered the defect with large autoflaps from the vicinity. The child developed into a healthy woman and has borne three children, two of whom are alive and healthy. Auscultation does not reveal anything abnormal in the heart action, although the apex beat is in the space left by the fissure in the sternum. The absence of a pericardium does not seem to have hampered the heart in this case, no adhesions having developed to interfere with its functioning.

52. Abstracted in The Journal, April 9, page 1241.

Lyon Médical, Lyons

March 13, XL, No. 11, pp. 549-610

55 Acute Syphilitic Meningitis. L. M. Bonnet and N. Goujat.

March 20, No. 12, pp. 621-674

56 Intradermal and Cutaneous Syphilin Reaction in Syphilitics. J. Nicolas, M. Favre, C. Gautier and L. Charlet.
57 *Tuberculin Reaction in Syphilitics. J. Nicolas, M. Favre and L. Charlet.

57. **Reaction to Tuberculin in Syphilitics.**—Nicolas and Favre report a positive response to the tuberculin test in a number of syphilitics free from any suspicion of tuberculosis. They say that the history of various lesions in the skin and viscera will have to be revised as the assumption of a tuberculous origin based solely on the tuberculin reaction is thus shown to be unreliable and that the findings related explain the occasional cures sometimes reported of supposed tuberculous lesions under mercurial treatment.

Presse Médicale, Paris

March 19, XVIII, No. 23, pp. 193-200

58 Malta Fever. Gouget.

March 23, No. 24, pp. 201-208

59 The Rôle of General Pathology in Medical Instruction. C. Achard.

Revue de Médecine, Paris

March, XXX, No. 3, pp. 153-232

60 Myxedematous Infantilism with Mitral Stenosis and Sclerosis of the Thyroid in a Girl of 16. (Le nanisme mitral myxedemateux.) F. Klippel and E. Chabrol.
61 Epidemic Poliomyelitis. (La poliomyélite aigue.) E. Job and J. Froment.
62 Psychiatry in the Army. A. Haury.
63 *Analysis of Cerebral Fluid in Meningococcus Meningitis. (Analyse du liquide céphalorachidien dans la méningite cérébrospinale à méningocoques. Composition et formule chimique.) W. Mestrezat.
64 *Paradoxical Urinary Syndrome in Epidemic Cerebrospinal Meningitis. Galebert and C. Thubert.
65 *Two Cases of Cerebellar Syndrome from Hypertension of Cerebral Fluid. M. Lafforgue.

63. **The Cerebrospinal Fluid in Meningococcus Meningitis.**—From study of three cases Mestrezat has deduced a formula for the cerebrospinal fluid which applied constantly to his three patients and which seems able to differentiate this form of meningitis from the tuberculous. The proportions rose and fell parallel to the clinical course. The formula may be summarized as follows: 3 per thousand or over of albumin; 0.12 or 0.25 per thousand of sugar; between 6 and 7 per thousand chlorids; freezing point normal or below, and a permeability for nitrates ranging from 45 to 55 per thousand of sodium nitrate.

64. **Paradoxical Urinary Syndrome in Epidemic Meningitis.**—Galebert and Thubert state that contrary to conditions observed in other infections, the urine is clear and abundant with an exaggeration of the elimination of nitrogen and phosphates at the height of the disease. Serotherapy does not modify the formula except that the proportions are not so high. The subsidence of the temperature under the influence of the serum does not always mean that the disease is conquered; the proportion of nitrogen in the urine may remain high, showing that the disease still has the upper hand and that it is necessary to keep up the serum until the amount of urea in the urine begins to decline. Persistence of the azoturia indicates, the authors state, that the lower temperature under serotherapy is merely a deceptive lull in the storm, which is liable to break forth again with renewed fury. As soon as enough serum has been given, the azoturia subsides.

65. **Cerebellar Syndrome from Hypertension of Cerebrospinal Fluid.**—Lafforgue was able to cure permanently by repeated lumbar puncture the two patients presenting the cerebellar syndrome described. There was nothing to explain the evident hypertension of the cerebrospinal fluid except possibly alcoholism and recent mumps in one of the patients. There was no meningitis and no lasting derangement. The relief that followed lumbar puncture was striking in each case. In the first about 25 c.c. of apparently normal fluid was withdrawn at each of the 6 punctures at 3 or 4 day intervals. A few more punctures were made in the other case, some daily. Both patients were young soldiers. Scherb has related a somewhat similar case in which a cerebellar syndrome from uremic poisoning was cured by lumbar puncture.

Revue de Gynécologie, Paris

January, XIV, No. 1, pp. 1-96

66 Utilization of the Vagina for a Drain after Total Hysterectomy. (Drainage vaginal sans tube.) M. Chaput.
67 Myoma on the Rectum. F. Descoeudres.

February, No. 2, pp. 97-208

68 *Microcystic Degeneration of the Ovary. (L'ovaire à petits kystes.) E. Forgue and G. Massabuau.
69 *Ileocecal and Appendicular Tuberculosis. P. Alglave. Commenced in No. 1.

68. **Microcystic Ovary.**—*Forgue and Massabuau* report 23 cases with illustrations of the findings in the ovaries and dis-

cuss the nature and pathogenesis of the fundamental lesions and their importance in the pathology of the pelvis.

69. **Tuberculous Lesions in the Ileocecal Region and Appendix.**—Alglave studies the six forms that tuberculous lesions in this part of the intestine generally assume, with their history in the literature, and also autopsy findings in 52 cases from his own experience, with illustrations.

Semaine Médicale, Paris

March 30, XXX, No. 13, pp. 145-156

70 Autopsy Findings in Familial Hypertrophic Neuritis of the Pierre Marie Type. P. Boveri.

Berliner klinische Wochenschrift

March 14, XLVII, No. 11, pp. 469-516

71 *Tuberculous Articular Rheumatism. (Ueber tuberkulösen Gelenkrheumatismus.) E. Melchior.
72 Good Ultimate Outcome of Treatment of Congenital Talipes Equinovarus by the Pascale Method. (Postoperative Resultate bei Behandlung des angeborenen Pes equino varus [illegible]
73 * [illegible]
74 [illegible] Bickel.
75 * [illegible] Urine and Stool as Test of [illegible] Wynhausen.
76 [illegible] of Antitrypsin in the Organism. (Wesen der Antitrypsinsbildung im Organismus.) A. Braunstein.
77 Roentgen-Ray Examination in Anterior Mediastinitis. O. v. Dehn.
78 *Tuberculin in Diagnosis and Treatment of Pulmonary Tuberculosis. (Anwendung des Tuberkulins bei Lungentuberku- [illegible] in No. 10.
79 M[illegible] [illegible]copic Findings. (Mikro- [illegible] bei Dunkelfeldbeleuchtung [illegible] Reicher.
80 Th[illegible] [illegible] vom Rechte des Arztes zur [illegible] und des Gutachten.) H. Lieske.

71. **Tuberculous Articular Rheumatism.**—Melchior reports a case of articular rheumatism in which the discovery of tubercle bacilli in the blood confirms, he asserts, Poncet's assumption of the tuberculous nature of many cases of rheumatism. When tuberculous pleurisy follows acute articular rheumatism, the tuberculosis may be secondary to the rheumatism, but there are a number of cases on record in which a pulmonary tuberculous process developed after an operation on rheumatic joints, or acute articular rheumatism followed an operation on a tuberculous joint or gland. These facts sustain the assumption that tuberculous articular rheumatism is merely a form of miliary tuberculosis restricted to certain regions, the joints. In his case a girl of 19 with a tuberculous glandular lesion in the neck in childhood and later in the jaw developed multiple acute articular lesions after an operation on the jaw. There was nothing to indicate gonorrhea or syphilis, and the joint lesions were more torpid than in ordinary acute rheumatism; the fever and pains were less intense. There was nothing to indicate pyemia; the discovery of tubercle bacilli in the blood cleared up the diagnosis.

73. **Early Diagnosis of Rectal Cancer.**—Kuttner reports a case in which a man of 51 complained of nausea and oppression, slight irregularity in bowel functioning, and rapid loss of 12 pounds in weight. Nothing abnormal was discovered in the abdomen or digestive functioning but traces of blood were found in the stool and examination with the finger revealed a minute linear projection in the rectum a few inches above the sphincter. The rectoscope disclosed a tendency to ulceration in the lesion and a scrap was excised for microscopic examination; signs of adenocarcinoma were found. The tumor was easily removed without interfering with the sphincter; it was only a little over half an inch in diameter, and the surgeon said it was the smallest rectal cancer he had ever encountered.

75. **Functional Testing of Pancreas.**—Wynhausen reports four additional cases to confirm his previous statements in regard to the reduction of the amount of diastase in the stool and the increase in the urine when the pancreas is not functioning properly. The average in health is about 500 diastase units, but with pancreas disease it drops to 10 or 30 units; in the urine the units are normally between 50 and 150, but with pancreatic disease they increase to 200 or 300.

78. **Tuberculin Treatment.**—Aufrecht reports satisfactory experiences with tuberculin treatment in minute dosage. He commences with 0.000025 gm. and increases by a fourth of this dose, never surpassing 0.0001 gm. supplementing it with all the usual other measures. A sanatorium course is advantageous for two or three months, he says, to insure hygienic conditions, but when the mode of life conforms to these already, the course of tuberculin can be carried out at home; after leaving the sanatorium it should be continued for months, the patient receiving an injection of 0.0001 gm. every week or two. He found the compound tincture of cinchona (of the German pharmacopeia), 2 teaspoonfuls in a little water before dinner and supper, extremely useful to keep the appetite good. If the cough disturbs sleep he gives 0.3 gm. Dover's powder at bedtime. If the cough is limited to daytime he prefers warm hot milk with seltzer water or an ipecac syrup mixture every two hours. When the cough is very obstinate, he keeps the patients in bed. Atropin is given to combat the night sweats, 0.0001 gm. in a pill at bedtime. Potassium bromid he found most effectual in treatment of insomnia. Drugs are not needed long as all these symptoms disappear, he asserts, under the tuberculin treatment; only iron is administered systematically with the tuberculin; it seems to aid in the local reaction induced by the tuberculin.

Deutsche medizinische Wochenschrift, Berlin

March 25, XXXVI, No. 12, pp. 545-592

81 *Postpartum Hemorrhage. (Wesen und Behandlung der Nachgeburtsblutungen.) W. Zangemeister.
82 Etiology of Epidemic Poliomyelitis. (Zur Aetiologie der Heine-Medinschen Krankheit.) H. Bonhoff.
83 [illegible] of Sections. (Färbung von Schnitten [illegible])
84 *Experimental Chronic [illegible] er Blood Pressure and Arterioscler[illegible] cher Nierenerkrankungen mit folg[illegible] und Arteriosklerose.) E. Kautenberg.
85 Differential Diagnosis of Gastric Ulcer and Cancer by Hemolytic Test of Stomach Content. (Zur klinischen Differentialdiagnose des Carcinoma und Ulcus ventriculi mittels des Nachweises hämolytisch wirkender Substanzen im Mageninhalte nach Grafe und Röhmer.) E. Fabian.
86 *Relapsing Influenza. (Die Rückfallsgrippe.) W. Hellpach. Commenced in No. 11.
87 Cultivation of [illegible] od Alkali Media. (Zum [illegible] mittels der Blutalkali- [illegible]
88 *Ab[illegible] Temperature Perception. (Ueber abnorme Temperaturempfindungen. Ein neues klinisches Symptom.) M. Sugar.
89 Direct Endoscopy of the Nasopharynx without a Mirror. (Epipharyngoscopia, Salpingoscopia et Rhinoscopia posterior dire[illegible]
90 Local [illegible] E. H. Oppenheimer.
91 *Spasm[illegible] Children over 12. (Ueber das Chvosteksche Symptom und den spasmophilen tetanoiden Zustand älterer Kinder.) O. Herbst.

81. **Treatment of Postpartum Hemorrhage.**—Zangemeister remarks that as the amount of blood is materially increased over normal during pregnancy, hemorrhage during delivery is of no moment unless considerably over a pint is lost. The average in 2,930 births in his service in two years was 170 c.c.; in 19 per cent. it was over 200 c.c., in 5.3 per cent. over 500. He insists that hemorrhage from supposed atony of the uterus is in nearly every instance traceable to retained clots. Even when there is a tendency to atony, the contractions still may be vigorous enough to induce complete retraction of the uterus if the uterus can be emptied of blood and kept empty for a few minutes. This can be accomplished by a single forcible expression of the uterus during contraction, which aids in expelling the retained clots, and then, by holding the uterus firm and pressing it down deep into the pelvis, the vessels are unable to bleed further and this gives the organ its chance to retract. He grasps the uterus firmly and by this means he has been able to arrest the hemorrhage in nearly every case. Ergot, he says, is of use only as it increases the force of the uterine contractions. When the hemorrhage is from a tear in the cervix fresh blood follows the child as it emerges, and the flow is independent of the contractions of the uterus, while bleeding from the site of the placenta does not manifest itself for several minutes after delivery and then some of the blood is dark red, with clots, and the gush coincides with the uterine contractions. By crossing the patient's extended legs and pressing them together, while the uterus is grasped, it is sometimes possible to arrest the hemorrhage from a tear. If the bleeding continues, there is probably some serious laceration of the cervix or of some branch of the uterine artery beyond the wall of the uterus, and suturing may be difficult or impossible. Momburg's belt constriction serves to gain time or may arrest the hemorrhage permanently.

average of 10 gm. a month, after which the increase is more gradual. Terrien's rule is to estimate the proper amount of milk by multiplying by 2 the first two figures of the child's weight in kilograms. Apert's rule is that the daily ration in grams should be exactly one-tenth of its weight in kilograms, plus 200 grams (A). The amount of each feeding should be one-fiftieth of its weight (B), and the number of feedings should be computed by dividing the first, A, by the second, B. Variot's rule is to compute the daily ration by multiplying by 15 the height of the child in centimeters (1 cm. equals 3/8 inch; 1 kilogram, 2 1/5 pounds).

48. **Chronic Appendicitis.**—Schwartz describes some of the forms that unsuspected chronic appendicitis may assume. In one case a boy of 12 had no appetite and for years had to be coaxed to eat even one or two rolls during the day. There were no symptoms and the mother applied to the physician merely on account of this chronic lack of appetite. Examination revealed some tenderness in the right iliac fossa and on the diagnosis of chronic appendicitis the appendix was removed. The boy developed appetite at once and conditions have since been normal. In another case a young man had recurring attacks of vomiting for several hours every two or three months but with no other symptoms, the digestion being apparently good. Nothing abnormal was found except that the large intestine was distended and thickened but nowhere tender. At last one of the attacks of vomiting was accompanied by signs of acute appendicitis and a small abscess was found in the appendix. Since its removal there has been no return of the attacks.

Bulletin de l'Académie de Médecine, Paris

March 1, LXXIV, No. 8, pp. 213-244

50 *Ectopia of the Heart. (Volumineuse hernie sus-ombilicale avec ectopie cardiaque.) M. Kirmisson.
51 Pathogenesis of Senile Cataract. H. Frenkel and A. Weiss.
52 *Proper Diet in Kidney Disease. G. Linossier and G. H. Lemoine.

March 22, No. 11, pp. 293-322

53 Graft of Muscle Tissue to Fill Cavity Left after Operative Treatment of Osteomyelitis in Clavicle or Tibia. Nélaton and E. Kirmisson.
54 Special Features of Arthritic Diathesis. Sir Dyce Duckworth and Chauffard..

50. **Displacement of the Heart Outside of the Thorax.**—Kirmisson reports a case in which a child was born with a large tumor just above the umbilicus, formed by a hernia, and another tumor also on the median line above which proved to be the displaced apex of the heart. The findings in this case are identical with those in a case reported by Vaquez and Foy in which the patient, a farmer, lived to be 37 years years old. In both cases the sternum was split into two parts and the apex of the heart presented in the cleft. Kirmisson was able to find only 2 other cases like these in the literature, but Lannelongue has a patient in good health to date on whom he operated 22 years ago, 14 days after birth. The apex of the heart in this case protruded through the cleft in the upper part of the sternum and through a gap in the skin. The ring of skin around the heart began to constrict that organ and consequently Lannelongue pushed the heart back into the thorax and covered the defect with large autoflaps from the vicinity. The child developed into a healthy woman and has borne three children, two of whom are alive and healthy. Auscultation does not reveal anything abnormal in the heart action, although the apex beat is in the space left by the fissure in the sternum. The absence of a pericardium does not seem to have hampered the heart in this case, no adhesions having developed to interfere with its functioning.

52. Abstracted in The Journal, April 9, page 1241.

Lyon Médical, Lyons

March 13, XL, No. 11, pp. 549-610

55 Acute Syphilitic Meningitis. L. M. Bonnet and N. Goujat.

March 20, No. 12, pp. 621-674

56 Intradermal and Cutaneous Syphilin Reaction in Syphilitics. J. Nicolas, M. Favre, C. Gautier and L. Charlet.
57 *Tuberculin Reaction in Syphilitics. J. Nicolas, M. Favre and L. Charlet.

57. **Reaction to Tuberculin in Syphilitics.**—Nicolas and Favre report a positive response to the tuberculin test in a number of syphilitics free from any suspicion of tuberculosis. They say that the history of various lesions in the skin and viscera will have to be revised as the assumption of a tuberculous origin based solely on the tuberculin reaction is thus shown to be unreliable and that the findings related explain the occasional cures sometimes reported of supposed tuberculous lesions under mercurial treatment.

Presse Médicale, Paris

March 19, XVIII, No. 23, pp. 193-200

58 Malta Fever. Gouget.

March 23, No. 24, pp. 201-208

59 The Rôle of General Pathology in Medical Instruction. C. Achard.

Revue de Médecine, Paris

March, XXX, No. 3, pp. 153-232

60 Myxedematous Infantilism with Mitral Stenosis and Sclerosis of the Thyroid in a Girl of 16. (Le nanisme mitral myxedemateux.) F. Klippel and E. Chabrol.
61 Epidemic Poliomyelitis. (La poliomyélite aigue.) E. Job and J. Froment.
62 Psychiatry in the Army. A. Haury.
63 *Analysis of Cerebral Fluid in Meningococcus Meningitis. (Analyse du liquide céphalorachidien dans la méningite cérébrospinale à méningocoques. Composition et formule chimique.) W. Mestrezat.
64 *Paradoxical Urinary Syndrome in Epidemic Cerebrospinal Meningitis. Galebert and C. Thubert.
65 *Two Cases of Cerebellar Syndrome from Hypertension of Cerebral Fluid. M. Lafforgue.

63. **The Cerebrospinal Fluid in Meningococcus Meningitis.**—From study of three cases Mestrezat has deduced a formula for the cerebrospinal fluid which applied constantly to his three patients and which seems able to differentiate this form of meningitis from the tuberculous. The proportions rose and fell parallel to the clinical course. The formula may be summarized as follows: 3 per thousand or over of albumin; 0.12 or 0.25 per thousand of sugar; between 6 and 7 per thousand chlorids; freezing point normal or below, and a permeability for nitrates ranging from 45 to 55 per thousand of sodium nitrate.

64. **Paradoxical Urinary Syndrome in Epidemic Meningitis.**—Galebert and Thubert state that contrary to conditions observed in other infections, the urine is clear and abundant with an exaggeration of the elimination of nitrogen and phosphates at the height of the disease. Serotherapy does not modify the formula except that the proportions are not so high. The subsidence of the temperature under the influence of the serum does not always mean that the disease is conquered; the proportion of nitrogen in the urine may remain high, showing that the disease still has the upper hand and that it is necessary to keep up the serum until the amount of urea in the urine begins to decline. Persistence of the azoturia indicates, the authors state, that the lower temperature under serotherapy is merely a deceptive lull in the storm, which is liable to break forth again with renewed fury. As soon as enough serum has been given, the azoturia subsides.

65. **Cerebellar Syndrome from Hypertension of Cerebrospinal Fluid.**—Lafforgue was able to cure permanently by repeated lumbar puncture the two patients presenting the cerebellar syndrome described. There was nothing to explain the evident hypertension of the cerebrospinal fluid except possibly alcoholism and recent mumps in one of the patients. There was no meningitis and no lasting derangement. The relief that followed lumbar puncture was striking in each case. In the first about 25 c.c. of apparently normal fluid was withdrawn at each of the 6 punctures at 3 or 4 day intervals. A few more punctures were made in the other case, some daily. Both patients were young soldiers. Scherb has related a somewhat similar case in which a cerebellar syndrome from uremic poisoning was cured by lumbar puncture.

Revue de Gynécologie, Paris

January, XIV, No. 1, pp. 1-96

66 Utilization of the Vagina for a Drain after Total Hysterectomy. (Drainage vaginal sans tube.) M. Chaput.
67 Myoma on the Rectum. F. Descoeudres.

February, No. 2, pp. 97-208

68 *Microcystic Degeneration of the Ovary. (L'ovaire à petits kystes.) E. Forgue and G. Massabuau.
69 *Ileocecal and Appendicular Tuberculosis. P. Alglave. Commenced in No. 1.

68. **Microcystic Ovary.**—Forgue and Massabuau report 23 cases with illustrations of the findings in the ovaries and dis-

possible. If there is no subsidence of the orbital symptoms after a few weeks of general treatment—potassium iodid, mercury, tuberculin or arsenic, according to the presumed etiology—operative treatment should no longer be deferred. In a large proportion of cases the inflammation in the orbit is secondary to a sinusitis. Chronic mild sinusitis without actual suppuration may involve the orbit and induce scotoma or exophthalmos. By endonasal treatment of the sinus, the orbital process may heal with it. The general practitioner may be forced to operate for an acute phlegmon in the orbit such as may develop after trauma or secondary to a sinusitis. If improvement is not evident after a few days the danger of brain complications may require the evacuation of the entire contents of the orbit. If the trouble is merely a subperiosteal abscess in the orbit it may heal if the focus is exposed and emptied, sparing the tissues in the orbit. The underlying sinusitis can then be given proper treatment by a specialist. Treatment of the sinusitis alone may cure the orbital trouble with retrogression of the protrusion and dislocation of the eyeball, chemosis, and tenderness without necessity for direct measures on the orbit. He advises, therefore, directing attention first to the treatment of the sinusitis unless the symptoms are too threatening. He adds that not less than 409 of the 684 cases of orbital inflammation he has found in the literature were traceable to sinusitis. Thus, in 59.8 per cent. of the cases the trouble originates in the sinus; in not less than 118 cases vision was lost and in 99 the case terminated fatally. Much harm can be averted by the general practitioner's appreciation of the complications to be feared. The measures to be advised must be based on thorough examination of the nose and general condition. At present it too often happens that he contents himself with compresses and a purgative, and does not consult with the ophthalmologist, the rhinologist or the surgeon until serious complications develop and the moment for successful relief is past.

Medizinische Klinik, Berlin

March 20, VI, No. 12, pp. 452-492

100 *Principles of Dietetics in Digestive Disturbances. (Grundlagen der Diätetik bei Verdauungskrankheiten.) A. Bickel.
101 *Pathology and Treatment of Acute Pancreatitis. D. Pupovac
102 Connection between Inhalation of Smoke and Croupous Pneumonia. (Zusammenhang von Raucheinatmung und kruppöser Pneumonie.) H. Grau.
103 Tincture of Iodin in Surgical Sterilization. (Wert der Joddesinfektion, geprüft an einem grossen Herniennmaterial.) E. W. Baum.
104 Epidural Injections plus Cocainization of the Nasal Mucosa to Relieve Labor Pains. (Ueber sakrale Anästhesie in Verbindung mit Kokainisierung der Nase zur Linderung der Geburtsschmerzen.) K. Mayer.
105 *Fate of Existing Pregnancy after Bilateral Oöphorectomy. (Schicksal der Schwangerschaft nach Entfernung beider Eierstocke während der Schwangerschaft.) L. Löwenstein. Commenced in No. 11.
106 Gout and the Kissingen Waters. (Ueber die Gicht und die Kissinger Trinkkur.) E. v. Sohlern.
107 Filterable Virus and Nature of Epidemic Poliomyelitis. (Ueber filtrierbares Virus und über das Wesen der Poliomyelitis acuta.) R. Kraus.

100. Dietetics in Treatment of Digestive Disturbances.—Bickel discusses what is meant by a light digestible diet. Does this mean foods easily attacked by the ferments, or easily passed along out of the stomach, or not inducing much secretion of digestive juices, or does it mean easily absorbed? The individual conditions in each case require that the diet should conform to the special manifestation of incompetency, and much more research is needed in this line. The effect on the motor and secretory functioning depends on the physical structure and chemical composition of the food. The more finely divided the food the less the demands on the motor functioning, and also the less the stimulus for secretion. Low temperatures seem to stimulate motor functioning; the more concentrated the solution the greater the stimulus to secretion. The chemical composition of the food is also important from this point of view; human milk leaves the stomach quicker than cow's milk, even in the same dilution. He lists as articles that have little, if any, effect in stimulating gastric secretion: water, alkaline mineral waters, tea, cocoa, cream, egg albumin, other pure native albuminoids in aqueous solutions; also 0.9 per cent. salt solution. Of solid foods he mentions boiled meat, fats of all kinds, boiled vegetables, starch and sugar; the vegetables should be taken in the form of a purée, that is, mashed soft. The list includes further white meat and fish as finely divided as possible. On the other hand, secretion is stimulated by all the alcoholic and carbonated drinks; by coffee, skimmed milk, meat broths and extracts, egg yolks, condiments and salt, except the 0.9 per cent. solution, and all raw, roasted or briefly boiled meat, salted and smoked meats, bread and all albumin and starch articles of food made in the bread form, and all vegetables not long boiled. This classification, he says, has rendered him inestimable service for many years in treatment of gastric trouble with secretory disturbances. Many of the foods make parallel demands on the motor and secretory functioning, or spare both alike.

101. Treatment of Acute Pancreatitis.—Pupovac describes the clinical picture of acute pancreatitis and the necessity for early diagnosis and operation, with every effort to protect the vicinity from the action of the pancreatic juice by appropriate tamponing. He regards the Bunge technic as preferable, done under primary or local anesthesia, with or without cecostomy.

105. Fate of Existing Pregnancy After Oöphorectomy.—Löwenstein concludes from his experience and the cases on record that the gravid uterus can tolerate bilateral ovariotomy without interference with the pregnancy. In his own case the operation was done on the forty-fourth day of the pregnancy and the patient was able to nurse her child for sixteen months after normal delivery. One ovary was removed during one pregnancy and the other during a later pregnancy, a dermoid cyst being removed at the first operation and the enlarged left ovary in cystic degeneration at the other. Essen-Möller removed the ovaries soon after conception without interference with the pregnancy, thus showing, he asserts, that the corpus luteum has not the importance for the pregnancy which Fraenkel maintains.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXI, No. 3, pp. 377-555. Last indexed March 19, p. 1015

108 Viscosity of Human Bloo[illegible] to Surgical Lesions. (Viskosität [illegible] :s mit fes. Berücksichtigung ihres [illegible] chen Krankheiten.) W. Müller.
109 Importance of Certain Anaërobes in Pathology, especially Puerperal Disease. H. Schottmüller.
110 *Mobilization versus Immobilization of the Lung in Treatment of Tuberculosis. P. Harrass.
111 Ossifying Myositis and Allied Ossifying Processes, especially with Organic Nervous Disease. (Myopathologische Beiträge.) H. Steinert.
112 Origin of Brachydactylia. E. Ebstein.
113 Mechanism of Invagination of the Intestine. (Mechanismus der Darminvagination.) C. Propping.

110. Therapeutic Mobilization Versus Immobilization of the Lung.—Harrass refers to the method of immobilizing the lung by means of artificially induced pneumothorax or a thoracoplastic operation according to Brauer's or Friedrich's technic, and to Freund's method of releasing the lung by severing the rigid first costal cartilage, or chondrotomy, as he calls it. Both of these methods have been evolved by empiric observation of Nature's processes. The former has a promising outlook in cases of severe advanced tuberculous lesions in one lung, while the chondrotomy is only for a small group of well-defined afebrile, incipient cases. Both, he says, seem to promise well; chondrotomy has given good results to date in the seven cases in which it has been applied, and the nitrogen injections have been followed by development of connective tissue in the compressed lung.

Monatsschrift für Kinderheilkunde, Leipsic

February, VIII, No. 11, pp. 657-728

114 Intestinal Bacteria and the Food. (Darmbakterien und Ernährung.) Otaki and H. Vogt.
115 Importance of Weighing Young Infants every Four Hours to Judge of their Condition. (Wert vierstündlicher Wägungen für die Beurteilung des Zustandes junger Säuglinge.) E. Schloss.

Münchener medizinische Wochenschrift

March 15, LVII, No. 11, pp. 561-616

116 Inhibition of Wassermann Reaction by Mercuric Chlorid. (Ueber die Hemmung der Wassermannschen Reaktion durch Sublimat und über die Möglichkeit dieselbe aufzuheben.) G. Satta and A. Donati.
117 Effectual Serotherapy of Epidemic Poliomyelitis. (Spezifisch wirksames Serum gegen das Virus der epidemischen Kinderlähmung.) P. H. Römer and K. Joseph.
118 Bacteriologic and Histologic Research in Congenital Syphilis. J. Trinchese.

that recently reported by Gräfenberg in which thrombosis developed in 6 out of 75 cases under this technic, but only once in a series of 75 cases with ordinary technic. In no instance was there a pre-existing tendency to varices on the legs which might have explained the thrombosis. With part of the circulation shut off the tendency to vomiting seemed to be materially reduced, but this advantage was counterbalanced by the sense of weight and tingling in the legs in the first few days after the operation. In the 3 cases in which thrombophlebitis developed the constriction had been applied for from 60 to 72 minutes; the operations were for hernia or ankylosis of the knee. On the whole he feels constrained to warn against the Klapp technic.

Ugeskrift for Læger, Copenhagen

March 3, LXXII, No. 9, pp. 235-268

167 *Lubricating Catheters by Boiling the Vaselin in the Water with the Catheter. (Et ny Metode til steril Inungering af Kathetre og Bougier.) C. Engelbreth.

March 10, No. 10, pp. 269-304

168 *Treatment of Pulmonary Tuberculosis by Artificially Induced Pneumothorax. (Pneumothoraxbehandling og almindelig Praxis.) C. Saugman.

March 17, No. 11, pp. 305-340

169 *History of Sporotrichosis. C. E. Jensen and A Kiørboe.

March 24, No. 12, pp. 341-368

170 Technic of Tonsillectomy. N. R. Blegvad.

167. **Sterile Lubrication of Catheters.**—Engelbreth boils the vaselin with the catheter in the water. This not only ensures that the lubricant is sterile, but as the catheter is lifted out of the water it takes on automatically a thin, even coating of the vaselin or oil floating on the surface.

168. Abstracted in THE JOURNAL, April 23, page 1414.

169. **Sporotrichosis.**—Jensen mentions that the sporothrix *was found in certain human lesions by American investigators* several years before de Beurmann's publications on the subject, but he adds that the cultural characteristics speak against the identity of the sporothrix found in France and in America.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

MODERN MEDICINE. Its Theory and Practice in Original Contributions by American and Foreign Authors. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, assisted by Thomas McCrae, M. D., Associate Professor of Medicine and Clinical Therapeutics in the Johns Hopkins University, Baltimore. Vol. VII, Diseases of the Nervous System. Cloth. Price, $6 net. Pp. 969, with illustrations. *Philadelphia: Lea & Febiger, 1910.*

ORGANIZATION OF THE PUBLIC SCHOOL HYGIENE SERVICE IN THE FEDERAL DISTRICT OF MEXICO. Paper presented to the American Public Health Association (37th Annual Meeting, Richmond, Va.). By Alfonso Pruneda, M.D. [Primera Alamo 16, City of Mexico.] Paper. Pp. 22, with illustrations. 1909.

DIE EXPERIMENTELLE PHARMAKOLOGIE ALS GRUNDLAGE DER ARZNEIBEHANDLUNG. Ein Lehrbuch für Studierende und Aerzte. Von Dr. Hans H. Meyer und Dr. R. Gottlieb, Professoren der Pharmakologie. Paper. Price, 12 marks. Pp. 483, with 62 illustrations. Berlin: Urban & Schwarzenberg, 1910.

THE INFLUENCE OF STRONG, PREVALENT, RAIN-BEARING WINDS ON THE PREVALENCE OF PHTHISIS. By William Gordon, M.D., Physician to the Royal Devon and Exeter Hospital. Cloth. Price, 7 shillings 6 pence net. Pp. 108, with illustrations. London: H. K. Lewis, 136 Gower St., W. C., 1910.

DRUNKENNESS IN MASSACHUSETTS, CONDITIONS AND REMEDIES. Special Report of the Board of Trustees of the Foxborough State Hospital. Submitted in Accordance with Resolve Approved May 26, 1909. Paper. Pp. 70. The Commonwealth of Massachusetts, 1910.

THE MEDICAL REGISTER. Printed and Published under the Direction of the General Council of Medical Education and Registration of the United Kingdom. Cloth. Price, 10 shillings 6 pence. Pp. 1762. London: Spottiswoode & Co., New Street Square, 1910.

THE DENTISTS' REGISTER. Printed and Published under the Direction of the General Council of Medical Education and Registration of the United Kingdom. Cloth. Price 3 shillings 4 pence. Pp. 235. London: Spottiswoode & Co., New Street Square, 1910.

TEACHERS' [illegible] CORRESPONDENCE-STUDY, BANCROFT TRAI[illegible] [illegible], N. J. Course I, Physiology. B. E. A[illegible] [illegible] A, Elementary Anatomy and Physiology of the Nervous System. Paper. 1910.

THE SCIENCE OF LIVING, OR THE ART OF KEEPING WELL. By [illegible] S. Sadler, M.D., Professor of Physiologic Therapeutics, the [illegible]ical School of Chicago. Cloth. Price, $1.50 net. Pp. 420. Chicago: A. C. McClurg & Co., 1910.

HANDBUCH DER SERUMTHERAPIE UND EXPERIMENTELLEN THERAPIE. Ein Handbuch fur Klinik und Praxis. Herausgegeben von O. Wolff-Eisner, Berlin. Paper. Price, 12 marks. Pp. 408, with illustrations. Munich: J. F. Lehmanns Verlag, 1910.

SIXTH ANNUAL REPORT OF THE EDUCATION [illegible] New York. For the School Year ending July 3[illegible] to the Legislature Jan 24, 1910. Cloth. Pp. 782. Albany: New York State Education Department, 1910.

CATALOGUE OF LOAN EXHIBITS AND LANTERN SLIDES TO ILLUSTRATE POPULAR LECTURES. Prevention of Blindness, No. 6. Paper. Pp. 14, with illustrations. New York Association for the Blind, 289 Fourth Ave., 1910.

ENTÉRO-CÔLITE: ESTOMAC ET SYSTÈME NERVEUX. Par le docteur L. Pron, Membre adhérent de la Société de médecine de Paris. Paper. Price, 2 francs. Pp. 132. Paris: Jules Rousset, 1, Rue Casimir-Delavigne, 1910.

THE CONQUEST OF DISEASE THROUGH ANIMAL EXPERIMENTATION. By James P. Warbasse, M.D., Surgeon to the German Hospital, Brooklyn. Cloth. Price, $1 net. Pp. 175. New York: D. Appleton & Co., 1910.

PRÉCIS D'AUTO-SUGGESTION VOLONTAIRE. Par le docteur Géraud Bonnet, d'Oran, Officier de l'Instruction Publique. Paper. Price, 3 francs. Pp. 300. Paris: Jules Rousset, 1, Rue Casimir-Delavigne, 1910.

LETTERS OF A PHYSICIAN TO HIS DAUGHTERS ON THE GREAT BLACK PLAGUE. By F. A. Rupp, M.D. Boards. Price, 50 cents net. Pp. 96. Philadelphia: The Vir Publishing Co., (1910).

FIRST ANNUAL REPORT OF THE COMMITTEE ON PREVENTION OF BLINDNESS OF THE NEW YORK ASSOCIATION FOR THE BLIND. Prevention of Blindness, No. 5. Nov. 1, 1909.

THIRTIETH ANNUAL REPORT OF CREIGHTON MEMORIAL ST. JOSEPH'S HOSPITAL, OMAHA, NEB. Fourth Year Ending Dec. 31, 1909. Paper. Pp. 35, with illustrations.

FIFTEENTH REPORT OF THE BOARD OF HEALTH OF THE TOWN OF MONTCLAIR, N. J. From Jan. 1, 1909, to Dec. 31, 1909. Paper. Pp. 69.

New Patents

Recent patents of interest to physicians:

943728.	Ophthalmoscope. F. Baum, Paris, France.
943918.	*Electrical medical appliance. B. R. Davenport, Philadelphia.*
943827.	Post-mortem table. T. B. Hennessy, Chicago.
943676.	Thermometer case and instruments. M. P. Hermann, Philadelphia.
944136.	Vaginal syringe. W. Herschlay, Chicago.
943679.	Embalming table. G. F. Honold, Sheboygan, Wis.
943685.	Truss. A. A. Klug, Merrill, Wis.
944203.	Screw-cap for collapsible tubes. F. McIntyre, New York.
944204.	Bed and bedstead for the use of invalids. J. McKay, Bendigo, Victoria, Australia.
943703.	Ankle support. W. J. McLinden, Owen Sound, Ontario, Canada.
943843.	Truss-pad. I. M. Pease, Cincinnati.
943894.	Device for treating cutaneous diseases. F. Rightmire, Paterson, N. J.
944001.	Chemical closet. W. O. Sheafor, Winnipeg, Manitoba, Canada.
944473.	Apparatus for making oxygen. G. von Ach, Newark, N. J.
944252.	Massage apparatus. E. M. Bassler, Chicago.
944765.	Stoppering for bottles intended to contain volatile liquids. J. Bengue, Paris, France.
944717.	Agitating device for mixing carbonic-acid gas and water. L. Caul, Cleveland, Ohio.
944420.	Antifouling composition. C. Ellis, Larchmont, N. Y.
944737.	Vacuum massage machine. N. Lombard, Akron, Ohio.
944738.	Medicament for diseases of the mucous membrane. W. Loose, Bremen, Germany.
944624.	Invalid's mattress. J. T. Lunn, Southhampton, England.
944455.	Injector. J., J. C. and R. D. Metcalfe, Fallowfield, England.
944830.	Gastroscope. M. Sussmann, Berlin, Germany.
945359.	Body brace. Joel U. Adams, Cincinnati, Ohio.
945118.	Hypodermic syringe case. Sheldon S. S. Campbell, Collinsville, Conn.
945380.	Atomizer. Frank C. Dorment, Detroit, Michigan.
945449.	Invalid bed. Robert L. Edgecombe, Waterville, Quebec, Canada.
945530.	Infant-weighing device. Kate B. Hayden, Columbus, Ohio.
945389.	Sphygmomanometer. Max Herz, Vienna, Austria-Hungary.
945332.	Obtaining ammonia from gas. Heinrich Koppers, Essen-on-the-Ruhr, Germany.
945282	Invalid bed or cot. George McElveen, Detroit.
945404.	Machine for pasteurizing liquids. Wm. J. McKee, Detroit.
945139.	Shoulder brace. Agnes Roland, Dorchester, Mass.
945292.	Surgical forceps. Alvin F. Sether, Glendale, Ore.
945638.	Glandular compound and producing the same. Jokichi Takamine, New York.
945657.	Disinfecting apparatus. Louis Wieden, New York.
945255.	Apparatus for distributing disinfectants. John W. Wilkie and R. Wilson, Birkenhead, England.
945307.	Tank for administering oxygen. George von Ach, Newark, N. J.
946427.	Manufacturing ammonia. Frederick W. Frerichs, St. Louis.
946256.	Syringe. Thomas R. McMerthney, Tacoma, Wash.
945858.	Shoulder brace. Eda Nesbitt, Swan Hill, Victoria, Australia.
946264.	Dynamometer. Samuel T. Park and J. E. Phillips, Danville, Ill.
946397.	Pasteurizing apparatus. Anders A. Pindstofte, Frederiksberg, near Copenhagen, Denmark.
945867.	Automatic spray valve. Harry J. Richter, Chicago.
946467.	Druggist's cabinet. Maurice P. Schwartz, Indianapolis.
945872.	Vibrator. Alfred J. Stecker, Detroit.
40429.	Design, Alta sick-call outfit. Joseph T. Homan, Cincinnati.

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Original Articles

ANATOMIC, PATHOLOGIC AND CLINICAL STUDIES OF LESIONS INVOLVING THE APPENDIX AND RIGHT URETER

WITH SPECIAL REFERENCE TO DIAGNOSIS AND OPERATIVE TREATMENT

JOHN YOUNG BROWN, M.D.,
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In two decades the brilliant work of American surgery has developed the disease of appendicitis from a practically unknown to a well-established clinical entity. In fact, this disease has become so popular that it is now credited with almost every symptom referable to the right lower quadrant of the abdomen. For this reason many a normal appendix has been unnecessarily removed, and many other lesions in this region simulating appendicitis have been overlooked. During the past two years a clinical analysis made on cases before operation compared with the lesions found during operation has demonstrated to us the many difficulties which present themselves in the diagnosis of some of the lesions of this quadrant. This applies particularly to those cases of combined lesions of the appendix and right ureter; appendicitis simulating genitourinary disease; urinary calculi simulating appendicitis, and lesions of other organs in this region usually mistaken for appendiceal or ureteral disease.

In order to attempt to determine definitely the cause of confusing clinical findings (such as hematuria, and skiagraphic shadows occurring with lesions of the appendix) and to simplify the diagnosis and treatment of these atypical cases, anatomic and skiagraphic studies of the relations of the appendix and ureter were made.

ANATOMY AND PATHOLOGY

The many varied relations of the appendix to the right ureter are best illustrated by anatomic and stereoscopic skiagraphs made on bodies, the appendix injected with mercury and stylets in the ureters, as is shown in the series of accompanying illustrations. The most important relation of these two organs is that which is found at the brim of the pelvis, just anterior to the right sacroiliac synchondrosis. With the cecum in the normal position this point corresponds to the base of the appendix and the location at which the ureter crosses the iliopectineal line (Fig. 1). This point of the appendix is more or less fixed and consequently is separated from the ureter by the peritoneum only. When the appendix lies retrocecal or hangs down into the pelvis, more or less of the whole appendix has this relationship to the ureter, as shown in Figure 2. The relation of the distal portion of the appendix and even that of the base to the ureter will necessarily depend on the position of the appendix, as shown in Figure 3. This illustrates the maximum distance of the appendix from the ureter, and will probably account for the absence of urinary findings referable to the ureter in the majority of cases of appendicitis. In making the above anatomic investigations of the course of the ureters through the pelvis, we found that in the pelvis of three male subjects it did not correspond *to that given in most texts on anatomy. Instead* of describing a semicircle with the convexity posterior extending from the brim of the pelvis to the symphysis, it was found that in these bodies the course of the ureters lay practically in the same plane from a point just anterior to the base of the sacroiliac synchondrosis to another located at the superior portion of the prostate gland. This is shown in Figure 4 by a line drawn between these two points. It is also demonstrated by stereoscopic skiagraphs with the sound placed in this plane in the median line of the pelvis, as shown in Figures 1 and 3. In this plane the ureters traverse the lateral wall of the pelvis, describing a slight curve with its convexity outward. Reference is made to these anatomic points at this place on account of the bearing which they will have on the location of skiagraphic shadows in the pelvis, discussed in the section on diagnosis.

It is easy to conceive how a lesion at the base of the appendix or one of a retrocecal or pelvic appendix which has extended to the peritoneum can involve the ureter by contiguity. If this is true, *it justifies the conclusion* that the erythrocytes, leucocytes, and albumin found in the urine accompanying appendicitis are produced by contiguous inflammation of the ureter. This local ureteritis, however, will not account for casts in the urine. Consequently it is probable that their production is dependent on a toxemia usually present in the acute and *more fulminating types of appendicitis.* The practical diagnostic deductions from the above is that a lesion of *the appendix in proximity to the ureter could account for* a simple hematuria, pyuria, albuminuria, or the combined findings of any of these elements in the urine. On the contrary, casts with these elements in the urine would indicate probably not this continguous ureteritis but a more marked lesion of an appendix producing considerable absorption of toxins. These latter cases usually present no difficulties in diagnosis on account of having pregnant objective signs of peritoneal irritation referred to the anterior abdominal wall, whereas the former location of lesions of the appendix having a mild subacute nature present only indefinite subjective symptoms, such as deep-seated tenderness.

This relationship in these positions of the appendix (retrocecal and pelvic) will also help to explain the cause of the peculiar type of pain transmitted down the ureter and the retraction of the testicle present in some cases of appendicitis. It will also show how concretions in the appendix may have the same locations in skiagraphs as ureteral calculi and *vice versa.*

CLINICAL CASES DEMONSTRATING THE PATHOLOGIC RELATIONSHIP OF THE APPENDIX AND URETER

Those lesions of the ureter, especially ureteral calculi located high above the brim of the pelvis, are rarely confused with appendicitis. These conditions are rare and it is only calculi of large size which usually present positive skiagraphic findings that occur in this part of the ureter. It is only those cases of retrocecal appendicitis in which the appendix curls back beneath the cecum along the course of the ureter which could produce misleading signs, such as hematuria or obstruction of the ureter from strictures or periureteral contractures. The following are brief summaries of illustrative atypical clinical cases exhibiting either symptoms or signs of both lesions of the appendix and ureter.

Case 1—Mr. B., aged 28, traveling salesman, had had four attacks of severe pain in right lower quadrant of the abdomen. The onset was sudden, and attacks lasted from one to six days, accompanied by vomiting. After acute symptoms subsided, there remained more or less pain in region of the appendix. The patient was seen on the fifth day of a very severe attack, which had been diagnosed by both his father and brother, who were physicians, as appendicitis. The urine showed erythrocytes and leucocytes. A skiagraph by Dr. Carman showed a shadow in pelvic portion of the right ureter. Diagnosis, right ureteral calculus. Combined operation. Appendix extended well over pelvic brim, adherent to parietal peritoneum over right ureter. The skiagraphic diagnosis of stone in right ureter was confirmed. The stone was located well down in the pelvic portion of ureter and was pushed into the bladder. The stone was passed forty-eight hours after operation.

Case 2.—Miss B., aged 26, had suffered for two years with a recurrent pain in right side. The attacks at times were severe, and she was never free from pain. Examination revealed mild muscular rigidity over region of the appendix. Urine analysis showed erythrocytes and leucocytes. Skiagraphic examination was negative. A diagnosis of chronic appendicitis was made. The abdomen was opened through gridiron incision. The appendix was found well over the pelvic brim *adherent to the parietal peritoneum* over the right ureter.

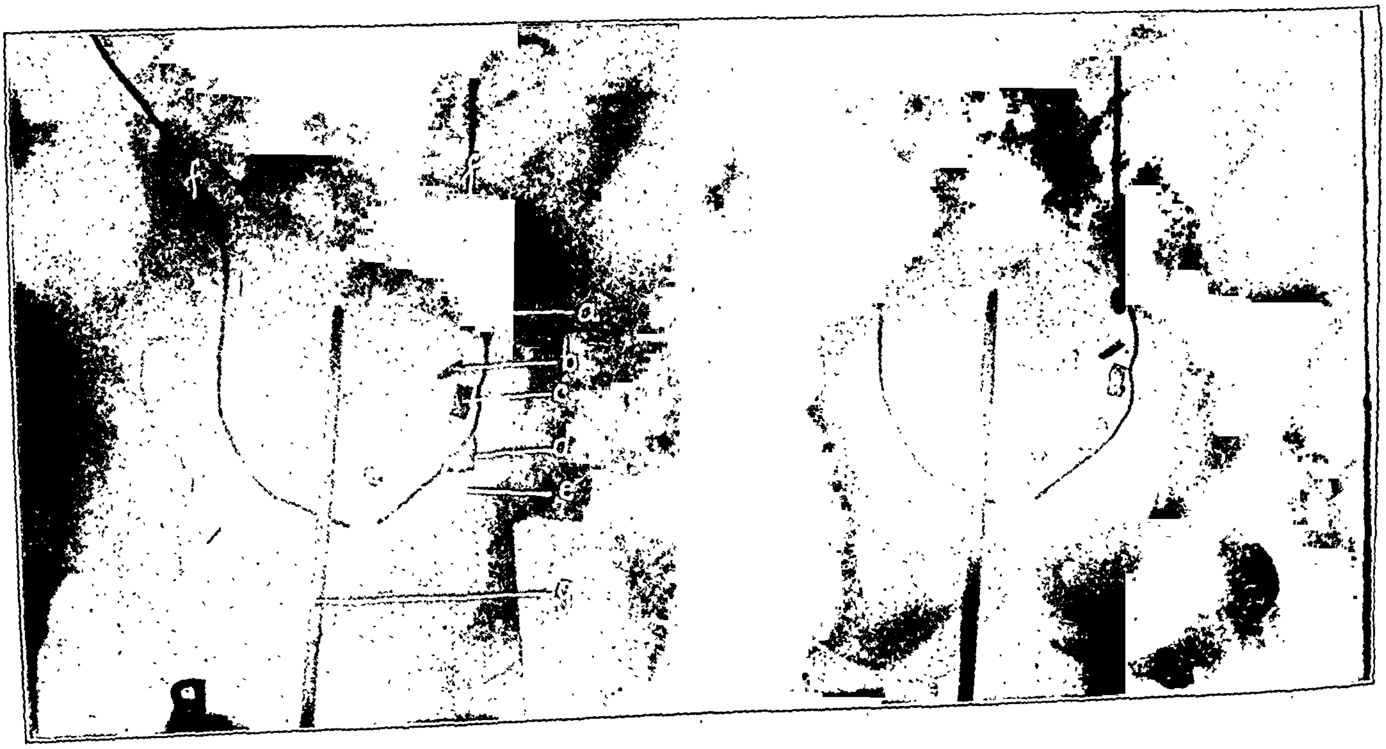
Case 3.—Mr. H., aged 48, broker, had had trouble for three years. The attacks came on suddenly with great violence, accompanied by vomiting and severe pain in region of the appendix, pain radiating downward along the cord to testicle. Twelve years prior to last operation he had been operated on by a New York surgeon for a stone in the bladder, the crushing operation having been done. The urine examination was negative. Skiagraphs (Figs. 5 and 6) showed a shadow in the region of the right ureter. Three skiagraphs presented a shadow in a different location at each examination. The mobility of this shadow with normal urine was the basis for a diagnosis of chronic appendicitis with concretion in the appendix. At operation an appendix 8 inches in length with a concretion and constriction at the lower third was found. This case was especially interesting as calculus in the ureter was excluded by the changing position of the skiagraphic shadow. The symptoms were undoubtedly due to appendiceal colic, the appendix being long and unable to empty its contents properly.

Case 4.—Mr. McC., aged 46, blacksmith, entered the hospital with the history of having been treated through several attacks of what had been diagnosed appendicitis. He was just getting over a rather severe attack similar in nature to those from which he had previously suffered. He complained of considerable pain in both right and left lower quadrant. There was some muscular rigidity on the right side and pain on deep palpation. Examination of urine showed erythrocytes and leucocytes. Skiagraphs showed a shadow in the pelvic portion of both right and left ureteral regions. Cystoscopic examination and ureteral catheterization showed right ureter free; obstruction about two inches above entrance of left ureter into the bladder. Combined operation was done; appendix was over brim, non-adherent, but constricted and diseased. A stone was removed from left ureter.

Case 5.—Dr. E., aged 32, had had several attacks of appendicitis. A skiagraph showed shadow in region of right ureter. There were erythrocytes and leucocytes in the urine.

Fig. 1.—Relation of appendix to ureter; (a), base of appendix injected with mercury; (b), lead wire in distal end of appendix; (c), lead ball attached to and in the same plane with ureter; (d), lead balls about two inches anterior to ureter; (e), lead ball about two inches posterior to ureter; (f), lead wire in ureter; (g), sound in rectum (showing slight displacement of the sound to the left, throwing it slightly posterior to the ureters at their lower portion).

The skiagraphs are placed at the bottoms of the pages for convenience in examination with parlor stereoscope.



At operation the appendix was found adherent to the ureter on the right side and well over the pelvic brim.

CASE 6.—Mr. N., aged 39, wholesale lumberman, was referred from Arkansas by his family physician who had observed him through a number of attacks of supposed appendicitis. The attacks were classical with regard to the ordinary symptoms and signs. The only positive finding on examination was tenderness over McBurney's point. The skiagraph by Dr. Carman showed a characteristic shadow low down in the right ureteral region. A diagnosis of ureteral calculi was made. This patient later had the calculi removed by Dr. William Mayo.

CASE 7.—Mr. P., aged 33, farmer, was sent to St. John's Hospital from Illinois with the diagnosis of intestinal obstruction. Two days previous to his entrance in the hospital he was taken with a violent attack of pain in the lower part of the abdomen more marked on the left than right side. It was soon followed by abdominal distention and vomiting, which had frequently increased. Doses of cathartics which were given failed to produce the desired evacuation. On examination the patient was found in this condition of marked abdominal distention, frequent vomiting, and more or less delirious, so that it was impossible to depend on his statements. Urine analysis showed marked hematuria. The skiagraph located a shadow low down in the left ureteral region. Catheterization of the ureters, which was attempted with this examination, was unsuccessful. At operation a calculus was found in this location and removed. Combined operation was done; the appendix was found normal.

CASE 8.—Dr. E., aged 32, had had five attacks of abdominal pain followed by tenderness located in the right lower quadrant of the abdomen. The first three attacks were of short duration, not accompanied by fever, leucocytosis, or peritoneal irritation (duration two to six hours). Following the second attack, erythrocytes appeared in the urine with each subsequent one. A skiagraph showed a shadow located down in the region of the right ureter, after which the patient himself concluded that he had ureteral calculi. The fifth attack was of longer duration and accompanied by two chills, fever, and slight leucocytosis. Erythrocytes and leucocytes continued to be present in the urine. After this attack another skiagraph was taken with stylets in the ureter, which demonstrated that the skiagraphic shadow was a considerable distance from the ureter. Diagnosis was then made of combined lesions of the appendix and ureter. At operation, the appendix was found inflamed at its base and retrocecal. Since the operation of appendectomy seven months ago, there has been no return of symptoms or abnormal findings in the urine.

DIAGNOSIS

The diagnosis of those lesions which give symptoms referable to this quadrant of the abdomen makes it necessary, first, to exclude those diseases which have no relation to the appendix or ureter, and, second, by special examination to differentiate between ureteral and appendiceal diseases. Among the general conditions which should always be considered as a possible source of error are tabes and the psychoneuroses. The intestinal crises of tabes can usually be recognized by numerous other signs of tabes. The peculiar paroxysms of pain in neurotic individuals associated with the menses are excluded by the stigmata of neuroses with negative local signs. Neurotic conditions, however, should not be held accountable for local symptoms when definite local

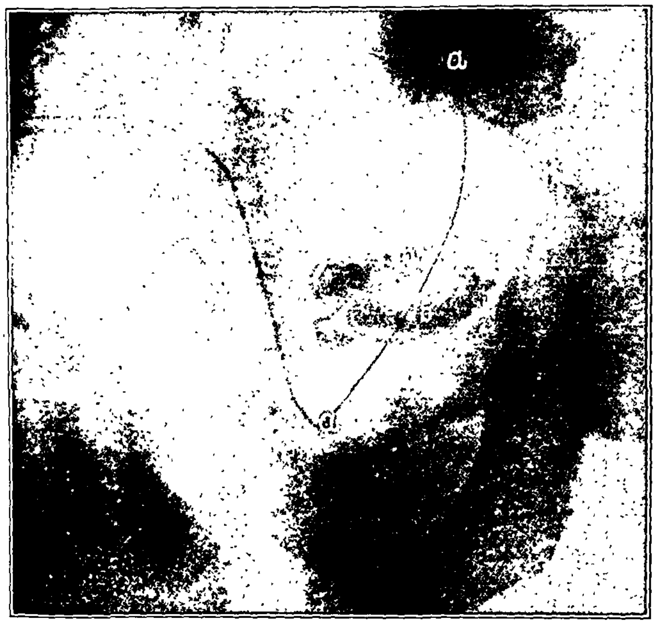


Fig. 2.—Relation of appendix to ureters; (a), stylet in ureter, (b), appendix injected with bismuth paste.

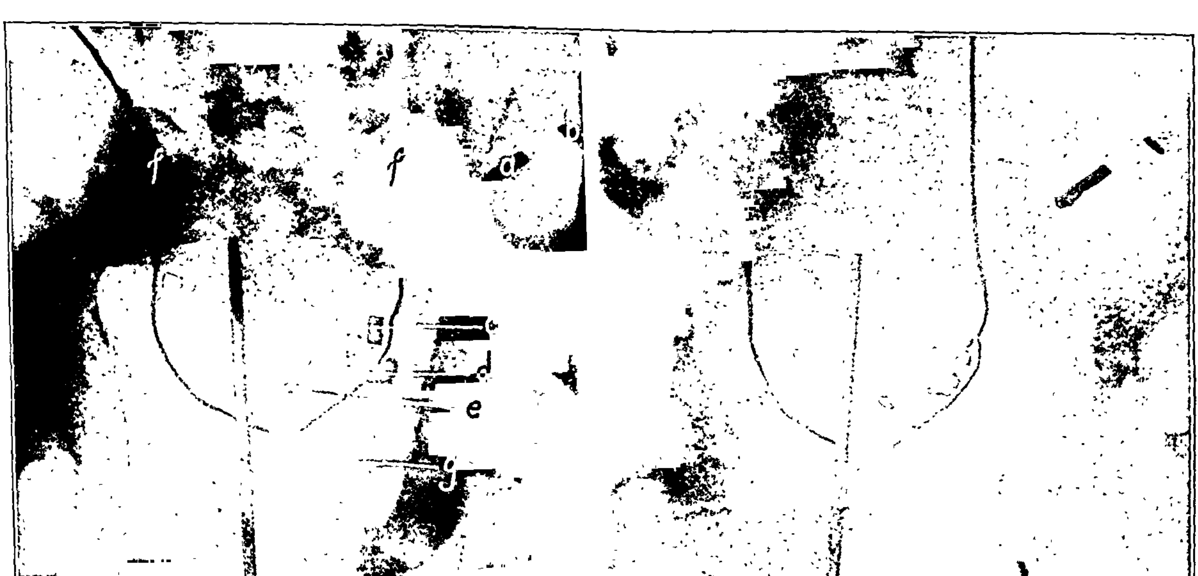


Fig. 3.—Relation of appendix to ureters; (a), base with the appendix injected with mercury; (b), lead wire in distal end of appendix; (c), lead ball attached to and in the same plane with ureter; (d), lead balls about two inches anterior to ureter; (e), lead ball about two inches posterior to ureter; (f), lead wire in ureter; (g), sound in rectum (showing slight displacement of the sound to the left, throwing it slightly posterior to the ureters at their lower portion). (For examination with parlor stereoscope.)

lesions can be demonstrated, as they in themselves may be the cause of the general neurosis.

Among local conditions independent of the appendix and ureter those diseases, in the female, of the uterus and adnexa (salpingitis, tubal pregnancy, ovarian cyst, subserous fibroid, etc.) can usually be differentiated by bimanual examination, as definite tumefaction in the pelvis. It is unusual for appendiceal or ureteral diseases to produce tumefaction that can be palpated by this method. Localized tenderness along the ureter can sometimes be elicited by rectal examination in calculi low down in the ureter. It is questionable, however, whether it is ever possible to palpate small calculi even when within reach of the palpating finger in the rectum. It was not possible in the clinical cases observed by us; and in the cadaver it was impossible to feel the stylet or small shot in the ureter, although the skiagraph (Figs. 7 and 8) demonstrates them within reach of the finger in the rectum. Tenderness and occasional bulging in the right fornix or pelvis are also present in lesions of a long pelvic appendix or pelvic abscess from this organ, but it is very exceptional that the appendix itself can be palpated. Figure 7 shows that the finger is barely able to reach to the top of an appendix of an average size through the rectum. Pyelitis in pregnancy gives a clinical picture which simulates appendicitis. It occurs more frequently in primiparæ, usually about the third month. Pyuria or local findings, which soon occur about the kidney, will clear up the diagnosis. As this disease is non-operable it should receive the first consideration in the suspected appendicitis in early pregnancy. Gall-bladder disease, especially in cases of ptosis of the liver or dependent gall-bladder, are usually differentiated by the physical findings. Ulcers and other lesions of the cecum with an extension to the peritoneum, resulting in a localized peritonitis, should be suspected when the history of their causal disease is present elsewhere in the body, or the local findings have been preceded by large intestine symptoms. Mucous colitis, which has been a very common cause for unnecessary operation on the accessory organs of the intestinal tract, should always be considered as a possibility. The characteristic evacuation catheterization of large amounts of mucus followed by paroxysms of abdominal pain is sufficient on which to base a diagnosis. Tuberculous peritonitis causing localized peritonitis should especially be suspected in children. A history of exposure and tuberculous lesions elsewhere in the body, diazo reaction in the urine, etc., are usually sufficient to form the basis of a positive diagnosis. Chronic seminal vesiculitis and calculi in the seminal vesicle may mimic both ureteral and appendiceal diseases. Periodic occurrence of pyuria which can be demonstrated by ureteral characterization and cytoscopy as not due to the kidneys or the bladder itself, combined with pus massaged from the seminal vesicles and skiagraphic findings, will support such a diagnosis.

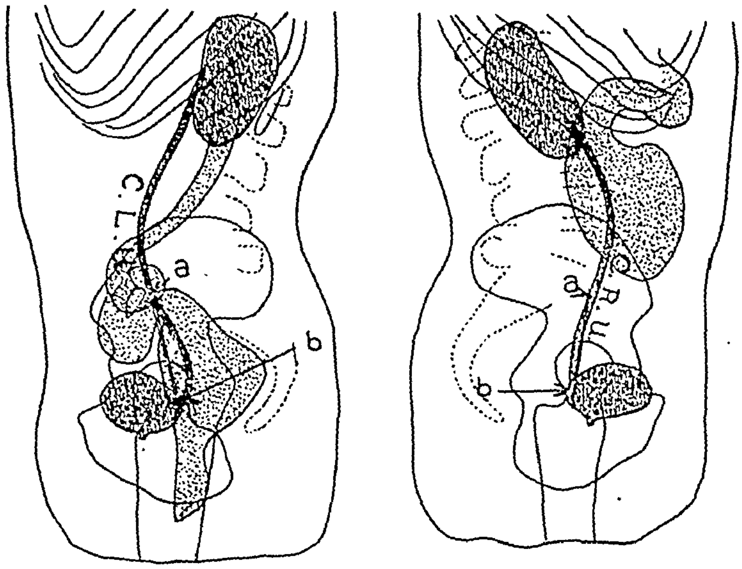


Fig. 4.—Diagrams showing, left (C. L. U.), course of left ureter; right (C. R. U.), course of right ureter; (a), synchondrosis; (b), prostate line from a to b represents plane in which sound lies when introduced into the rectum in position described.

After these conditions have been given due consideration and positively excluded, in many of these cases there are symptoms and signs common to both ureteral and appendiceal lesions. It has been demonstrated by the illustrative cases given above that evidence derived from the subjective, physical and urinary findings are not sufficient in some of those cases on which to base a positive diagnosis. It is therefore, necessary to add to this evidence that procured by skiagraphy, cystoscopy and ureteral catheterization. The mere demonstration of a shadow along the course of the ureter with the positive findings in the urine and other clinical evidences is usually not sufficient for a positive diagnosis. A skiagraph taken with stylets in the ureter used as negative evidence is also not without some degree of error. For example, the fact that stylets in the ureter do not meet obstruction or come in contact with a skiagraphic shadow is not absolutely sufficient to exclude a stone in the ureters. There are three conditions in which a stone might be present in the ureter, and the findings of a styleted skiagraph misleading. One is a calculus in a ureteral pocket allowing the stylet to pass up the ureter and not producing a skiagraphic shadow in contact with the stylet. Another is the anomaly of a double ureter as shown in Figure 9. A calculus might be present in one ureter and yet a stylet passed up the other one would not be in contact with the shadow. Ricketts has collected many reports of cases of double ureter. The third is a shadow appearing in contact with a stylet in the ureter in a single skiagraph which can be demonstrated to be either anterior or posterior to the stylet by stereoscopic skiagraph.

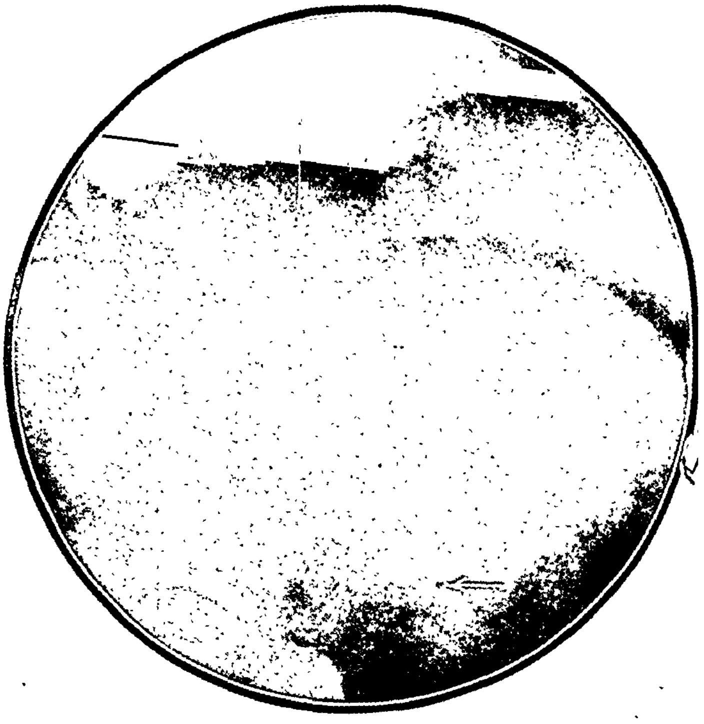


Fig. 5.—The arrow indicates shadow of concretion in appendix, external to the sacro-iliac synchondrosis over ilium.

ORIGINAL METHOD AS AN AID TO THE LOCATION OF SKIAGRAPHIC SHADOWS IN THE PELVIS

It has been our misfortune to have so many reactions from cystoscopy and catheterization of the ureters either from trauma or infection that we have attempted other methods of localization of the skiagraphic shadows in the pelvis which occur in a considerable number of these cases. While we do not wish to discredit the value of the skiagraph of the styleted ureters as probably the most satisfactory and positive way of localizing these shadows, we have become convinced that if a more simple and practical method could be found which would avoid these reactions it would be of greater advantage, for the reason that it would be more frequently attempted. From personal experience we have found that the majority of skiagraphic shadows found in the pelvis are not in the ureters, as has also been shown by Parks and others. They are usually phleboliths in the papiniform, vaginal and hemorrhoidal plexus of veins. The other common condition producing these shadows in the pelvis are calcified glands and enteroliths. Many of these shadows of extra-ureteral opacities are not on the same transverse plane with the ureter.

The male pelvis seems to be especially adapted to other methods of localization of ureteral calculi found within its bounds. This lies in the fact that the rectum running from the anus backward to the coccyx, and then upward to the first sacral vertebra will allow the introduction of a sound along the median line of the pelvis which will be on the same transverse plane of the ureters. As has been shown above under the anatomic description, the ureters traverse the pelvis in a transverse plane extending from the base of the sacroiliac synchondrosis to the posterior portion of the prostate gland. In taking advantage of these anatomic relations we have endeavored to demonstrate that when a sound in the rectum is brought forward beneath the crotch of the symphysis and then passed directly upward for a distance of 6 inches, its tip will strike the first sacral vertebra just below the promontory of the sacrum on the level and in the same plane with the ureters, as they leave and pass forward from the posterior pelvic wall. The base of the sound in this position is against the prostate gland and, therefore, on the same level with the ureters as they enter the bladder. The sound in this position then traverses the median line of the pelvis in practically the same transverse plane with the ureters as shown in Figures 1 and 2, provided their course is as constant as we have found it on three subjects. Having thus determined the normal plane of the ureters by taking stereoscopic skiagraphs with the sound in the rectum in this plane, it can be determined whether a given skiagraphic shadow is in the same plane with the sound. If the course of the ureters is constant, then one would be justified in concluding that a skiagraphic shadow which was any considerable distance from this plane (anterior or posterior to the sound) would probably not be in the ureters. At the present time no definite claim can be made for this method, because it depends on the constancy of the course of the ureters; i. e., on whether they traverse practically the same plane in different individuals. This must be determined by extended anatomic and clinical investigations, which should be stimulated by this preliminary report. It is true that the lateral course of the ureter has already been demonstrated to vary considerably by skiagraphs taken on clinical cases. This seems to be more pronounced in the female than in the male, probably owing to the other conditions which are present, causing the dislocation of the other organs. In the three bodies studied and the clinical cases observed by this method, so far the course of the ureters in the male seem to be remarkably constant in this plane. Therefore, the liberty was taken of inserting the method into this article, as one that would be worthy of consideration in the diagnosis of these conditions. Provided it is of value, its simplicity and freedom from danger and reaction highly commend its trial.

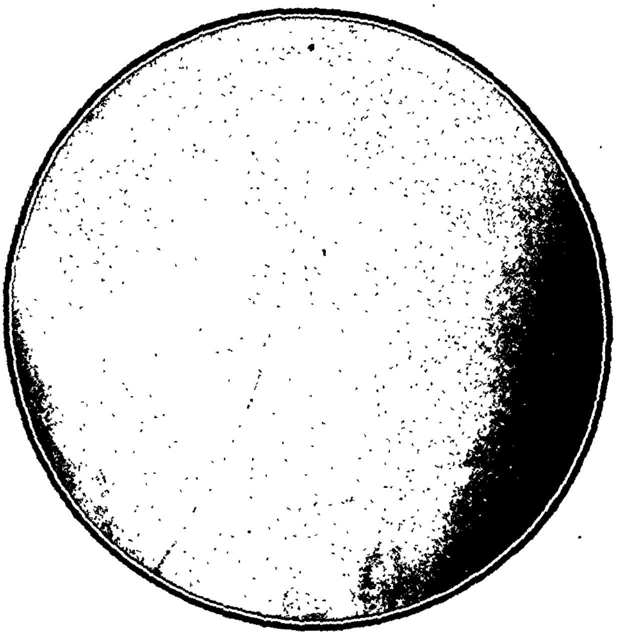


Fig. 6.—Skiagraph taken with stylets in the ureters. The shadow (indicated by the arrow) not in contact with the stylet in the right internal to synchondrosis ureter.

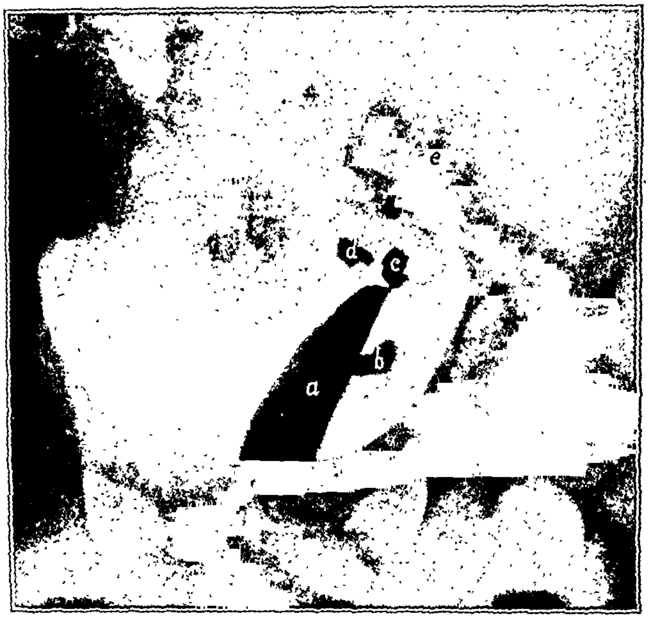


Fig. 7.—Skiagraph showing (a), finger in rectum; (b), three lead balls about two inches anterior to ureter; (c), two lead balls attached to and on the same plane with the ureter; (d), lead wire in the tip of appendix; (e) mercury in the proximal portion of the appendix.

Technic.—No preliminary catharsis is necessary. (If suspicious shadows are found a second skiagraph should be made within two or three days to exclude enteroliths.) An ordinary straight No. 26 French ureteral sound, graduated in inches, is introduced for the distance of six inches into the rectum with the patient in the dorsal position. It is pulled up anteriorly until it impinges on the subpubic ligament, directly in the median line. If the introduction of the sound is painful to the patient, which is due to meeting obstruction in the folds of the rectum, the rectum can be inflated, which usually overcomes this difficulty. With the sound in this position, stereoscopic skiagraphs are taken in the usual manner.

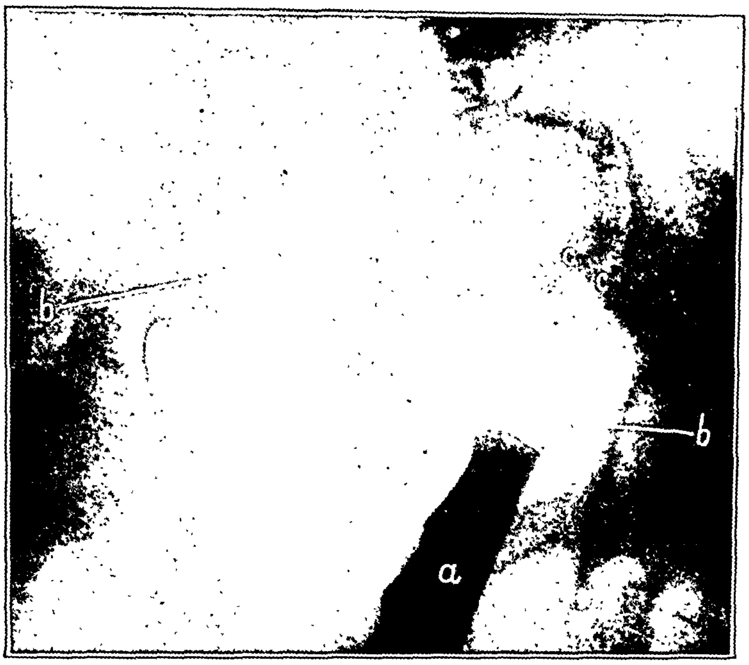


Fig. 8.—Skiagraph showing (a), finger in rectum; (b), stylet in ureter; (c), appendix injected with bismuth paste.

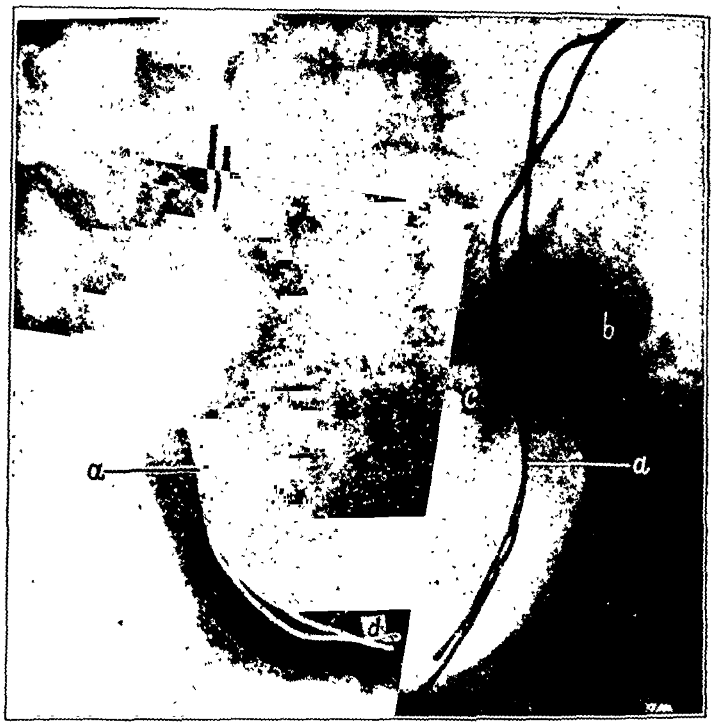


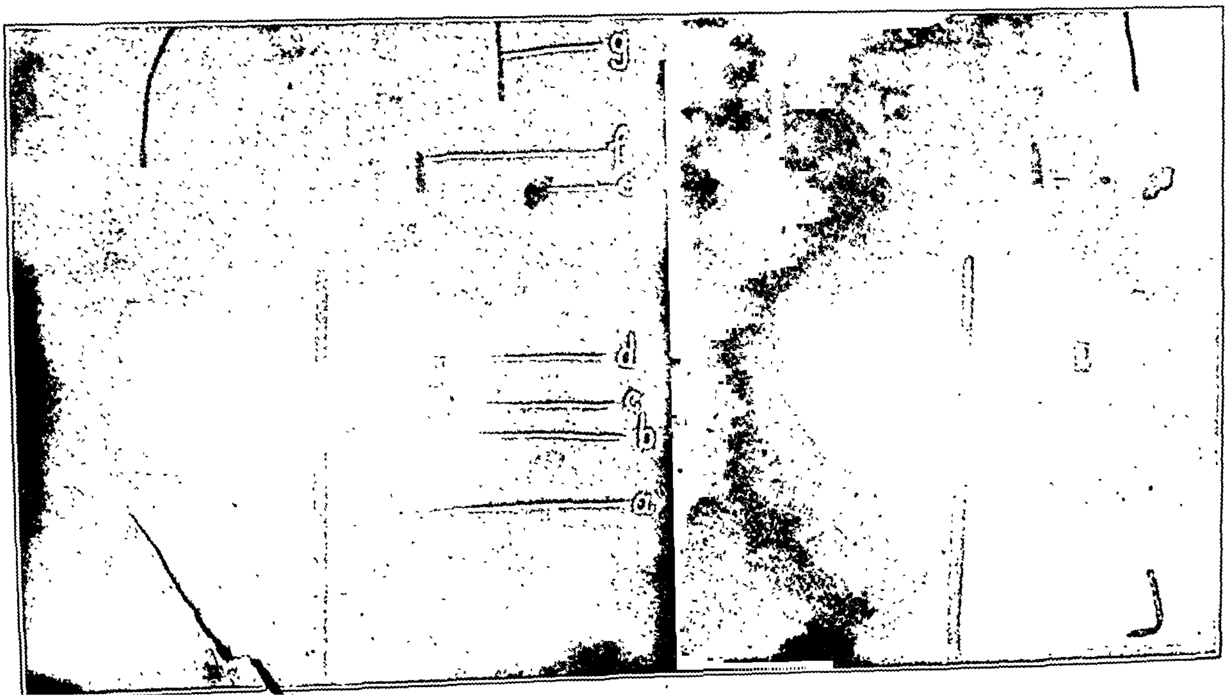
Fig. 9.—Skiagraph of double ureters; (a), stylets in bilateral double ureters; (b), mercury in the base of the appendix; (c), lead wire in the tip of the appendix; (d), lead ball posterior to the ureter.

TREATMENT

The treatment of these lesions necessarily depends on an accurate diagnosis, which will not only place positive indications for treatment, but will also indicate the absolute methods of the procedure to be undertaken, such as the location of the incision and the route of the operation. The treatment of definite lesions of the appendix is well established. The treatment of ureteral calculi is not entirely established and will depend to a considerable extent on the findings in the individual cases. If the calculus is small enough to pass through the ureter, and there is no evidence of complications, such as pyelitis, hydronephrosis, etc., and repeated skiagraphic examination demonstrates the progression of the calculus toward the bladder, there is no imperative indications for surgical interference. On the other hand, if the calculus is complicated by secondary conditions of the kidney or does not progress satisfactorily after a number of attacks of ureteral colic, indications are definitely fixed for radical removal.

The operations adapted for the removal of ureteral calculi are, first, the extraperitoneal operation; second, the intraperitoneal operation; and, third, the combined

Fig. 10.—Skiagraph showing (a), sound in the rectum in the proper position in the same transverse plane with the ureters; (b), lead ball about two inches posterior to sound in ureter; (c), three lead balls about two inches anterior to the sound and ureter; (d), two lead balls attached to ureter and in the same transverse plane with the sound; (e), base of the appendix injected with mercury; (f), lead wire in the tip of the appendix; (g), lead wire in the ureters withdrawn from the pelvic ureter. (For examination with parlor stereoscope.)



extraperitoneal and intraperitoneal operation. In unquestionable cases of ureteral calculi a simple extraperitoneal operation should be attempted. Incision is made according to the location of the calculus, along the external border of the rectus to the peritoneum. The peritoneum is separated (in pelvic calculi) down to the posterior surface of the bladder and prostate gland. The ureter is palpated with the bare fingers, beginning at the bladder and going upward. If the stone is felt, a longitudinal nick is made in the ureter between the two fingers grasping the stone, through which the calculus is squeezed and removed. A cigarette drain is placed down to the opening in the ureter and the wound closed in the usual manner. If the calculus is not discovered by this extraperitoneal method, an opening should be made in the peritoneum at the site of the incision and bidigital palpation of the ureter should be made with the finger in the abdominal cavity and the thumb along the course of the ureter extraperitoneally. If the stone is found, it is removed in the same way as extraperitoneal operation. If no calculus is found, the appendix and complete exploration of the abdomen should be made. It is necessary to remember that these operations should be done as soon as possible after definite location is made of the calculi in order to be positive that they have not changed their position. It is not infrequent that after a catheterization of the ureters, ureteral colic, which is stimulated by the instrumentation, causes the stone to pass into the bladder. Many cases in which calculi have not been found during operation, which have been previously definitely located with a skiagraph of the styleted ureters, can be accounted for on the ground of change of position. In other cases the stone has been milked into the bladder without the knowledge of the operator.

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THE ABUSE OF HYPODERMIC STIMULATION DURING AND AFTER SURGICAL OPERATIONS

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Hypodermic stimulation during and after surgical operations is ordinarily governed by the habit of the anesthetist or surgeon more than by his deliberate judgment. It is also true that the anesthetists and surgeons who have had the largest experience and the best results use such stimulation rarely. The apparent necessity for stimulation will depend on the skill and dexterity of both the surgeon and the anesthetist. It will also depend on the anesthetic chosen, the environment in which the operation is performed, the previous condition of the patient and the care with which he may have been prepared for the operation.

Given a patient in fair physical condition, prepared for operation with due care, skilfully anesthetized and operated on without undue loss of time or loss of blood, by a fairly skilful surgeon, and hypodermic stimulation will, with a few rare exceptions, be quite unnecessary. More than this, if unnecessary it is definitely injurious. So far as my observation and experience go, the great majority of the patients who are operated on in our hospitals need no hypodermic stimulation whatever during or after the operation, and furthermore they are injured if such stimulation is given to them.

The anesthetic, if given with judgment and skill, is for a time a stimulant of itself. This is particularly true of ether, for the first thirty to fifty minutes. If, after this time has elapsed and the amount of anesthetic is diminished, as should usually be done, the depressing effect is not great, provided severe hemorrhage does not occur. If it does occur, hypodermic stimulation to increase the blood-pressure is, of course, definitely contraindicated while it lasts.

After the patient is returned to his bed and as he recovers from the anesthetic, with the nausea, vomiting and pallor incident to its administration, his pulse softens and, not uncommonly, becomes very thin and small, and even intermittent. It is under these circumstances that the inexperienced nurse and the unthinking doctor rush for the "strych and the spart," and "shoot it into him." In reality, all that is needed is postural treatment, the external application of heat, and possibly water or salt solutions by the rectum or by the stomach, depending on the nature of the operation which may have been performed. His condition is no more serious than that of the small boy who has had his first large dose of alcohol or of tobacco.

More than once have I known of instances in which I have believed that the balance has been turned against a desperately ill patient by such a course of injudicious and irrational hypodermic stimulation. I have seen a patient die in the characteristic clonic convulsions of strychnin poisoning, and on making a calculation of the amount administered as recorded on the chart it has been apparent that all conception of the enormous aggregate dose of the poison had been lost in the excitement of the effort to "pull the patient through."

On the other hand I cannot recall a single instance in which I believe that a patient has ultimately recovered as a result of the use of such hypodermic stimulation. In some instances temporary improvement may have occurred but the subsequent reaction or collapse has been all the more profound, and those so treated who recover do so in spite of the treatment and not because of it. Better results could have been procured without it or by the employment of milder and more rational measures.

The best results and the lowest mortality of the busiest surgeons of to-day are attained by the simplest methods.

Careful diagnosis and accurate estimates of the ability of the patient to undergo the operation are made. He is prepared with great care, the anesthetic is wisely chosen and skilfully given, he is operated on without avoidable exposure, delays, or hemorrhage, he is returned to a warm bed, placed in a favorable position, watched by a competent nurse AND LET ALONE. If he is very restless and really suffering from shock or severe pain as he emerges from the anesthetic he may be given a moderate dose of morphin and atropin but, notwithstanding its stimulating and soothing effect, he is ordinarily better off if it can be omitted.

No strychnin, no spartein, no digitalin, no nitroglycerin—no whip and spur for a tired and jaded and played out or overworked heart, if such he has—no piling up of new poisons to impose additional burdens on the organs of elimination. Let him alone. Keep him warm and very quiet. Give him all the water he can absorb by the avenue of choice; mouth, rectum, under the skin, or within the peritoneal cavity, and as few drugs as possible. "His apparently feeble heart's action is often occasioned by the retention of a large volume of blood in the enormous veins of his thoracic and abdominal organs and, as little blood is delivered to the right heart to be acted on, little effort is required to pass it on to the left heart and so on to the half-filled arteries against a greatly reduced arterial blood-pressure. I have long regarded this process as essentially conservative in its effect and disapproved of what I have deemed unwise and irrational drugging in the treatment of such physiologic *phenomena*."[1]

"By some means supply to the depleted vessels an increased volume of fluid at a high temperature for the heart and blood-vessels to contract on, so that the circulation and blood-pressure may be speedily re-established. In abdominal operations this may be done by leaving a large volume of hot salt solution in the cavity; or . . . the abdomen may afterward be opened and the fluid introduced, thus securing at once the application of heat to the great abdominal nerve-centers, the mechanical pressure and support of a large volume of fluid as an object on which the abdominal walls may contract, thereby restoring to a degree the intra-abdominal pressure, as well as supplying water for absorption into the circulation. The sustained Trendelenburg position is, for obvious reasons, an important accessory."[2]

In the treatment of shock Crile's therapy is founded on this hypothesis of vasomotor exhaustion. The drugs commonly used are not only inactive but are positively harmful in most instances.

"Digitalis: The heart is not depressed or weakened in any way and a cardiac stimulant is not indicated.

"Nitroglycerin, alcohol: These drugs, by dilating the peripheral vessels, further lower the blood-pressure and hasten death.

"Strychnin: This drug apparently acts in customary doses only on the sensory neurons of the cord and thereby heightens reflex irritability. This action is not stimulation. Under normal conditions strychnin may raise the pressure by facilitating the access of normal afferent impulses from the periphery. This action, in the presence of suitable factors, *obviously conduces to shock;* it is precisely antagonistic to the blocking action of cocain, and, indeed, Crile found that of deeply shocked animals those receiving strychnin died more rapidly than the untreated controls, or, if they survived, convalescence was much more prolonged.

"Atropin, given before the experiments, was found slightly to lessen the tendency to shock."[3]

By such methods as these, based on such reasoning and experimental proof, the greatest surgeons of the century are securing the best results and the lowest mortality ever recorded in surgical literature. "The more they know the less they do."

If compelled to choose, be guilty of a sin of omission rather than a sin of commission. Give up acting for the sake of action in emergencies. Keeping a cool, calculating, thoughtful poise, order only those remedies and measures which reason and wisdom teach us may benefit and not injure the patient. Add nothing to his burden by doubtful dosing with deadly drugs.

Give him a chance.
Let him alone.

505 California Building.

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1. Wetherill: The Conservative Agency of Shock, West. Med. Rev., March, 1898.
2. Wetherill: The Effect of High Altitudes in Aggravating Surgical Shock, Ann. Surg., April, 1897.
3. Smith, H. W.: Surgical Shock; A Review of Recent Literature, U. S. Naval Med. Bull. October, 1909.

A NEW AND QUICK METHOD FOR STAINING SPIROCHETES (TREPONEMATA) IN SMEAR PREPARATIONS *

ALBERT A. W. GHOREYEB, M.D.
BOSTON

In this method the following solutions are used:

1. One per cent. aqueous solution of osmic acid.
2. Liquor plumbi subacetatis, diluted 100 times with distilled water. This diluted solution should be freshly prepared.
3. Ten per cent. aqueous solution of sodium sulphid.

A thin smear is preferable. No heat fixation is necessary. The smear is stained as follows:

1. Cover with osmic acid solution for thirty seconds.
2. Wash in water.
3. Cover with lead subacetate ten seconds.
4. Wash in water.
5. Cover with sodium sulphid solution ten seconds.
6. Wash in water.

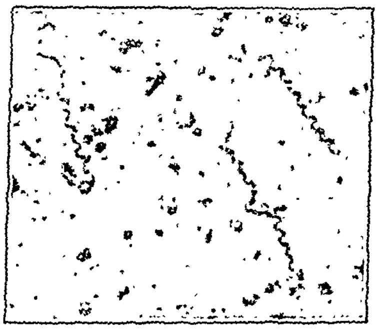

Fig. 1.—Spirochete of syphilis (*Treponema pallidum*). Smear preparation from primary syphilitic sore on penis. The black masses are fragments of cells. × 1500.

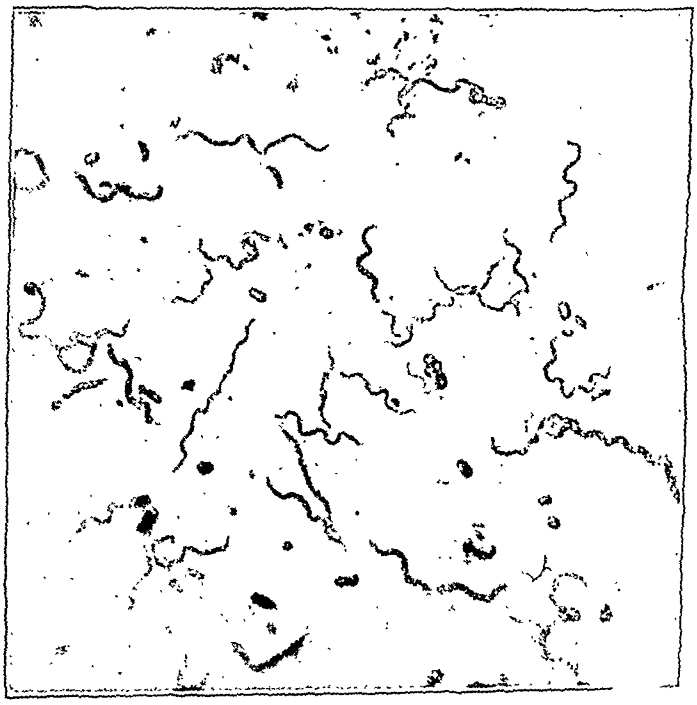

Fig. 2.—Various forms of spirochetes from which the spirochete of syphilis is to be differentiated. Smear preparation of *material* taken from between the teeth and gum of a patient who had ulcers on his gums and lips. A few bacteria are also seen. × 1500.

This process is gone through with three times. Following this the osmic acid solution is applied for thirty seconds and the specimen is then washed in water, dried and mounted in balsam. A thorough washing in running water is essential after the application of each solution to prevent the formation of excessive precipitates.

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* From the Pathological Laboratory, Massachusetts General Hospital.

The osmic acid, the first time applied, acts as a fixative and a mordant. The lead unites with the albumin to form lead albuminate, a compound insoluble in water. The sodium sulphid transforms the lead albuminate into lead sulphid and causes the preparation to become stained brown. The osmic acid turns the brown color to black.

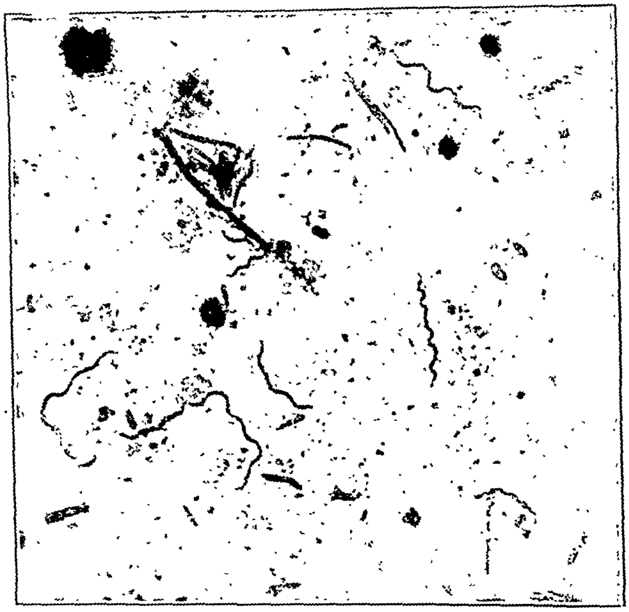

Fig. 3.—Smear taken from the teeth and gums of a normal individual, showing various forms of spirochetes and bacteria. × 1500.

The spirochetes, bacteria and cellular detritus are stained black.

Thanks are due Dr. James Homer Wright for his valuable criticisms and Dr. William H. Boos for his suggestions.

A NEW ABDOMINAL DRAIN

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That an entirely satisfactory drain to lift fluids from the cul de sac over the pubis has not heretofore been devised is evidenced by the fact that every stage in the evolution of the drain—the glass tube, the unprotected gauze, the cigarette, the split rubber, the gutta-percha strips, and the fenestrated rubber tube—each still has its adherents.

A recent experience with a large fenestrated rubber abdominal drain, in which it was necessary to administer a general anesthetic, split the tube down to one of the lower eyelets and with the finger push a plug of intestine out of the lumen of the tube before it could be removed, led me to devise the drain shown in the accompanying illustration. In the few cases in which I have used it it has met all the indications of an ideal drain, since it combines all the advantages of all the other materials used for this purpose and none of their disadvantages.

It is inexpensive, easy of construction and can be sterilized by boiling.

It drains, not only by the pumping action of the diaphragm, but also by capillary action.

It drains all the levels of the abdomen and not alone from the lowest point.

It remains active and unclogged until its function is finished.

It does not adhere to surrounding structures, and therefore it comes away without pain, trauma or hemorrhage.

It is unlike the glass tube, in that its use is not attended with the danger of pressure necrosis.

It is unlike the gutta-percha strips, in that there is no danger of its breaking and leaving a part of it behind among the intestines.

To make this drain, ordinary rubber dam and soft rubber tubing of any desired size are used. Cut a piece of the dam as long as the tube that is to be used, and fold it back and forth from four to six times, the folds being a little less in width than double the diameter of the tube. Clamp the center of each end of the folds with hemostats as in Figure 1, A. Split out about one-eighth of the circumference of the tube as in Figure 1, B, making a trough or gutter of it. Pull on the hemostats and throw the rubber into folds, place it in the gutter and clamp it at each end until it is sewed down the middle from end to end directly opposite the slit, as in Figure 1, C. A few long stitches through rubber and tube will suffice, and it can then be cut any desired length, the rubber holding the thread securely. Now clip small holes in the inner folds at several levels and the drain is ready to be boiled for use.

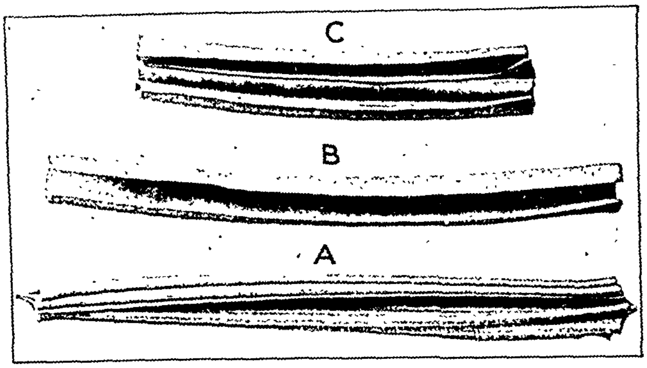

Fig. 1.—Abdominal drain. A, Rubber dam folded; B, tubing cut into a gutter; C, tubing with folded rubber dam sewed into it.

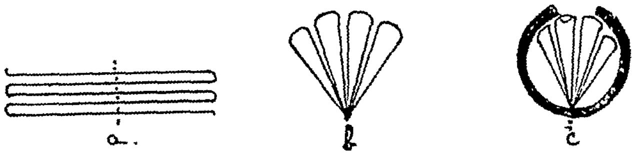

Fig. 2.—Cross-sections of abdominal dam. A, Rubber dam folded; B, thrown into folds; C, sewed into tube.

A glance at the cross-section of this drain (Fig. 2) shows how the fluids can gain access to the interior at any level. They pass out either through one or more of the small tubes, or along the gutters that lie between adjacent folds, or between the rubber dam and the enclosing tube.

1000 West Grace Street.

The Professional Anesthetist.—The professional anesthetist will usually administer less of the anesthetic than the unskilled. He will induce the anesthesia so gradually that the change is a transitional one, during which time the patient's mind, brain, heart, lungs and circulatory apparatus quietly assume the new state of anesthesia.—E. Metzenbaum, in *Ohio State Medical Journal.*

A NEW SUTURE.—THE DOUBLE FIGURE-OF-EIGHT

EDWARD H. RICHARDSON, M.D.
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BALTIMORE

Surgeons everywhere are familiar with the ordinary figure-of-eight suture, and those who have employed it must have recognized its value as an economizer both of time and of suture material. It possesses still other merits, chief among which are first its simplicity; second, its very wide field of application; and third, the fact that it combines some of the advantages of both the continuous and the interrupted suture. All these factors have participated, of course, in popularizing this suture, especially among abdominal surgeons and gynecologists.

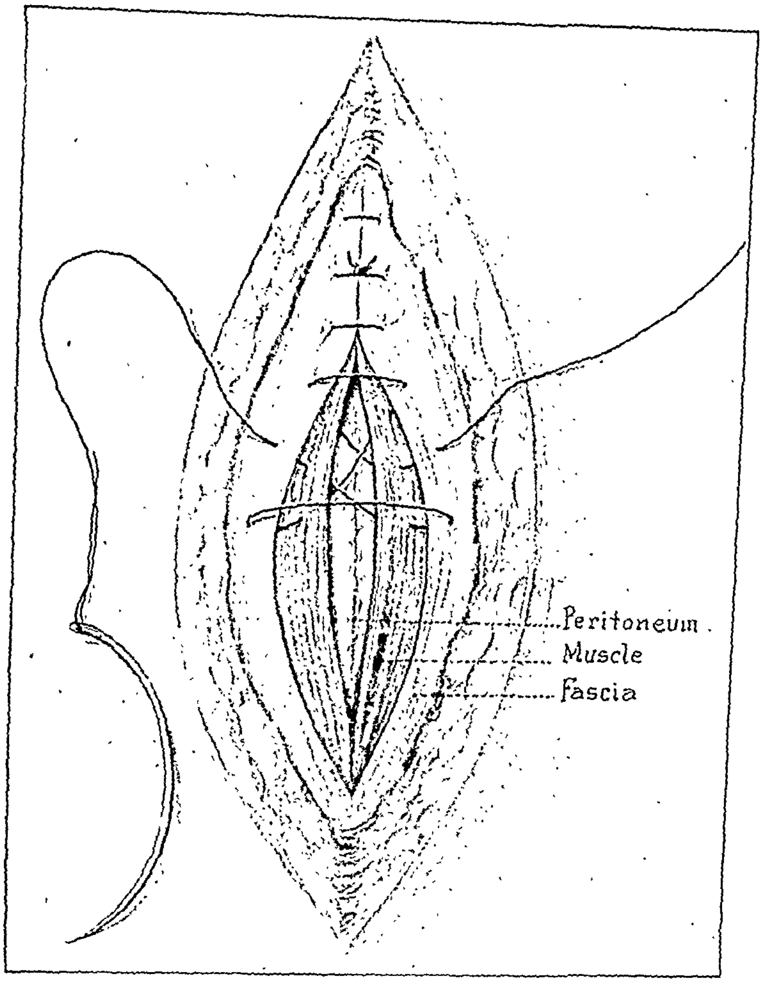

Fig. 1.—Closure of midline incision below the umbilicus. The peritoneum has been closed by a continuous suture. At the upper angle of the incision a double figure-of-eight suture has been introduced and tied, doing the work of three interrupted sutures. A second suture has been introduced, but has not been drawn taut. It shows clearly that traction on one end is transmitted directly to the upper loop, approximating the tissues included in the upper half of the suture, whereas the same result is accomplished over the lower half by traction on the opposite end. Thus, when the ends are tied there is a uniform strain on the suture, and no puckering. Two or three of these sutures suffice to close the average incision.

A few months ago it occurred to me to add another loop to this already useful suture, thereby making a double figure-of-eight, and thus, in a limited field of application, at least, greatly increasing its value.

After subjecting this innovation to a practical test at the operating table in a large number of cases, I am convinced that it renders the suture a distinct improvement over the single figure-of-eight, in that it represents a gain of exactly 33.33 per cent. in every point of advantage that the latter possesses.

I have used this form of suture chiefly in the closure of abdominal and lumbar incisions, where the closure was done in layers, and also after myomectomy, finding it especially useful in obliterating dead space, effecting neat approximation, and in controlling hemorrhage.

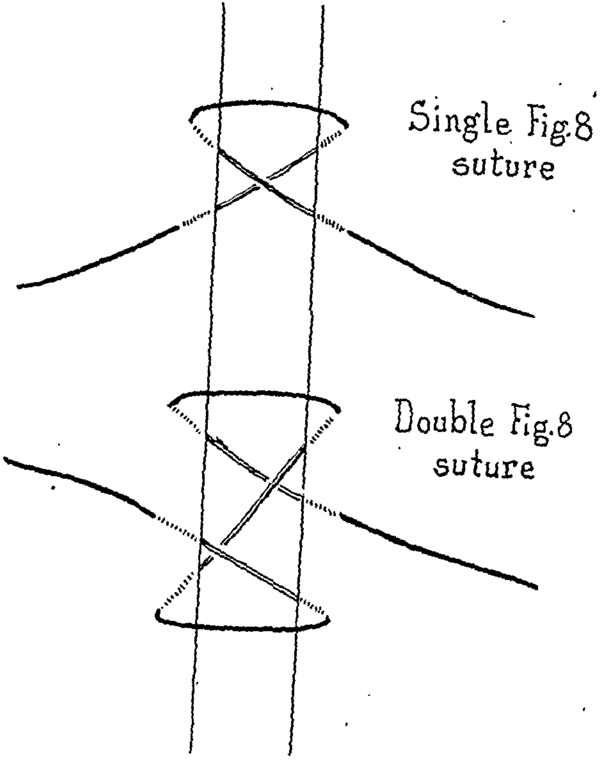

Fig. 2.—The ordinary and the double figure-of-eight suture schematically shown.

The technic of the suture is simple, and is clearly shown in the accompanying illustrations.

Johns Hopkins Hospital.

THE UNITED STATES PHARMACOPEIA FOR 1910

HOW MAY IT BE CONSTRUCTED?

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1. Let the new Pharmacopeia contain only such drugs as are of positive therapeutic value.

If we are in the age of scientific beliefs and research, I cannot see how this preamble can be objected to by anyone. *Certainly no one individual practitioner wishes* to perpetuate a drug he considers valueless, or would use for a specific purpose one that he deemed valueless. In the abstract, then, no one could object to this resolution. Now as to what drugs are valueless: Here comes the crux of the whole discussion and perhaps the Waterloo of the recommendation; and nothing will save it but to carry by storm Recommendation 2, viz.:

2. Let it be officially declared that when a drug or preparation of a drug that is not official in the Pharmacopeia of 1910 is prescribed, that the standard of purity and the method of preparation is that ordered in the last Pharmacopeia in which the preparation was recognized.

There is absolutely no satisfactory outcome to be expected from *any circulation of requests for approval* or disapproval of the various drugs contained in the present Pharmacopeia. The differences of opinion would be legion, and the slim majority obtained for deletion of little practical value. Such decision for deletion must be left to the judgment of three to five clinical men selected by the U. S. P. Revision Committee. Practitioners all over the United States who are disappointed by these omissions from the U. S. P. of 1910 may regret and pity the lack of wisdom of this deletion committee, but must be therapeutically and pharmacally content with the U. S. P. 1900 standard for their pet drugs.

If a deleted drug is valueless, how can a certification to that fact be better made than by omitting it from the 1910 Pharmacopeia? If a deleted drug is of value, it will survive in spite of such deletion, and may be incorporated into the 1920 Pharmacopeia as any new drug found valuable.

3. Let it contain such new drugs as have been proved of therapeutic value.

All honest practitioners of medicine must approve of this recommendation. A drug (not some fool-befogged formula to cloud the active ingredient) that is of value in overcoming disease, or a disturbed condition, whatever the source from which it was derived, or by whom discovered, should be made official. And here again a committee of five clinicians appointed by the U. S. P. Revision Committee must decide what drugs are eligible, and then what drugs are of sufficient therapeutic use to be officialized. Again, many practitioners will not be satisfied with the committee's selection, but a drug found valuable and not recognized by the committee will be in no worse position than it was before, viz., an unofficial drug. Such a drug will clamor for recognition, and may be recognized through the means proposed in Recommendation 4. On the other hand, if a drug is raised to importance and prominence unadvisedly by this committee, or if another similar acting and better drug has been discovered and supercedes it, it may be dropped from the U. S. P. of 1920, and then each Pharmacopeia will represent scientific advance and not as now be a book of historic reference.

Recommendation No. 4 which follows, needs no discussion, except as a question of advisability and policy:

4. Let there be issued a supplement to the Pharmacopeia, in 1915, which shall make official such new drugs as have been proved to be of therapeutic value during the years of 1910-1915.

5. Let the 1910 Pharmacopeia give the most simple titles possible to all new drugs, especially to the synthetic drugs. If it is considered impossible or inadvisable to make an official title of a drug simple, an official abbreviation should follow the name of the drug.

Every writer of a prescription, and most assuredly every teacher of materia medica and prescription writing, will approve of this. The terrible heart-rending and brain-splitting attempt to prevent all possible advertisement of a proprietary drug has been followed by continuous condemning all over this country, and has forced the ordering of the drug by a proprietary name, much to the profit of the drug promoter.

6. Let the 1910 Pharmacopeia give official approval only to the best of the preparations of the Galenic drugs, and let it not officialize the little-used and useless preparations of these drugs.

In the abstract everyone must approve of this as read. Now, again, who shall determine which are the most efficient preparations? Why not a committee of ten, five clinicians and five pharmacists, appointed by the Revision Committee? Whatever this committee decides, it will be criticized anyway. But it is certainly supposable that one or two preparations of a Galenic drug are better than the others, and certainly the best is none too good. Again, if a prescriber desires a deleted preparation, he can revert to the 1900 Pharmacopeia. But a smaller, useful teaching book we must have for medical school purposes.

7. Let the 1910 Pharmacopeia not give official approval of all of the known salts (of iron and mercury, for instance), but officialize only the best.

This is similar to Recommendation 6, and should be decided by the same committee; their decision will be subjected to the same berating. It might even be well for this committee to be protected by special insurance policies against suits for malfeasance in office.

All joking aside, it is perfectly supposable that a certain small number of salts are better than many other salts, and again the advisability of reducing the unnecessary number of official preparations to what can be readily taught as the best to medical students.

8. Let the average adult dose appear after each drug and each preparation of it, not the range of dose, i. e., minimum to maximum, as there is no exact minimum or maximum limit of dose. The dose is enough to accomplish the object aimed at by the prescriber, and all he cares to know is the average dose.

This recommendation is self-explanatory. It certainly cannot be dictated how small a dose a prescriber may order. Nor should he be officially limited to a given dose when, in his judgment, with this particular preparation, in this particular condition, in this particular patient, a larger dose is required. Chemical assayists and pharmacologists attest the varying strength of drugs and preparations, and this will perhaps be always true of Galenic drugs. Consequently, it is absurd to prescribe the limit of a dose dogmatically, or to give such a wide range of dose as to make the drug and its strength appear ridiculous.

Let there be no translation of metric to Troy doses. Let each dose (and both should be given) be smooth for each system.

9. As the U. S. P. gives the official titles of drugs in Latin, it also should give the genitive after each title. This would be of special value in teaching the correct writing of prescriptions. It is not always easy to determine the declension to which a Latin noun belongs, or whether it may not be indeclinable.

This cannot well be objected to by anyone, and will be a real help to teachers of medical Latin and to medical students.

10. Let the official preparations of a drug be enumerated under the title of that drug.

This was an omission from the last Pharmacopeia that has been considered a mistake, and I doubt not that the next Revision Committee will be glad to rectify it.

In closing, I wish to hope that a vote by this society on each recommendation, could be transmitted to the new Revision Committee. A positive vote will help the committee, and a negative vote will show that a body of clinicians cannot back up the recommendation.

252 York Street.

Cataract Extraction in the Insane.—Cataract operation can be done in the insane, says Dr. F. M. Fernandez, in the *Medical Record*. It may be a little more dangerous than in sane people, but not much more. Extreme vigilance has to be exercised, and one should try to avoid any possible cause of excitation during the operation, and especially during the postoperative treatment.

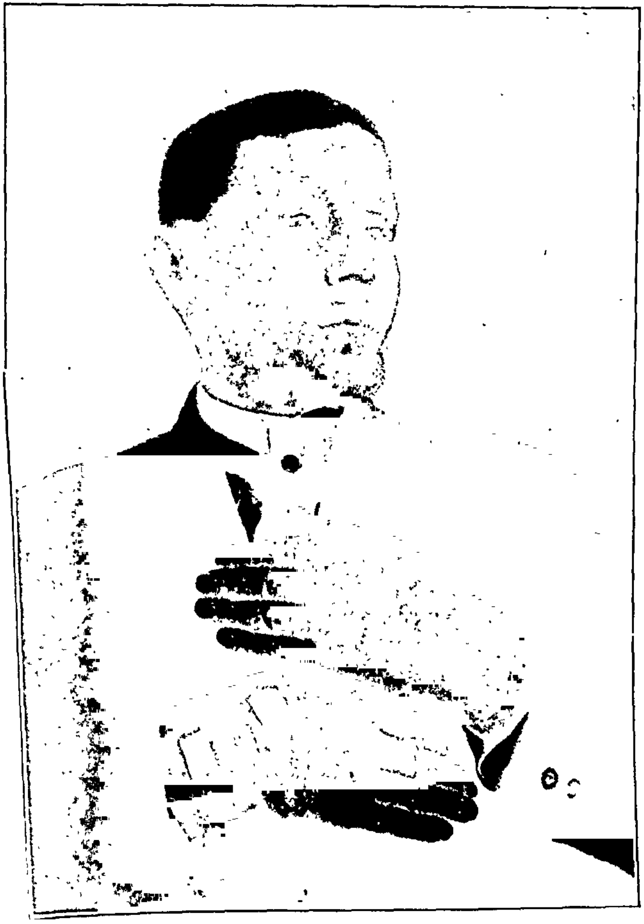
A CASE OF TUBERCULAR LEPROSY

C. W. YARRINGTON, M.D.
CALUMET, MICH.

On Aug. 5, 1909, I was called to examine for life insurance a patient who gave the following history:

Mr. M. M. J. E., married, aged 37, Norwegian by birth, has lived in America nine years, two of which were spent in Alaska herding reindeer (1905 and 1906). He is now a carpenter, his former occupation was fisherman. His father and mother were said to be living and well, but I found later that his mother is now confined in a leper hospital in Norway. Two brothers are living and well; one brother died from an injury. The patient is the father of four healthy children, and his wife is in good health.

Beginning of Leprosy.—The applicant had always been well until 1905, when the present trouble began. He first noticed a peculiar sensation about the hands and face which he describes as though grains of sand had been driven into the skin. Small elevations soon appeared at these places. Soon after his return to Calumet in the Fall of 1906 he began to have trouble with his nose and consulted a physician. The turbinates were removed to free him from the chronic colds or coryza that he was having and he has not been troubled with his nostrils since.



Showing tubercles on face and hands.

Course of the Disease.—The tubercles have gradually increased in number until his face and hands and forearms are well covered; there are some lesions on the body and feet. The nails of both great toes are gone. The eyebrows have almost disappeared and the beard is scanty. The tubercles are more numerous about the nose, lips, chin and forehead with some thickening of the ears. The lesions on the hands are larger and farther advanced, several have suppurated and healed showing white scars in contrast to the distinct bronzing about the tubercles. There is slight anesthesia about the tubercles.

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After advantage of Dr. A. S. Warthin's visit to Cal-
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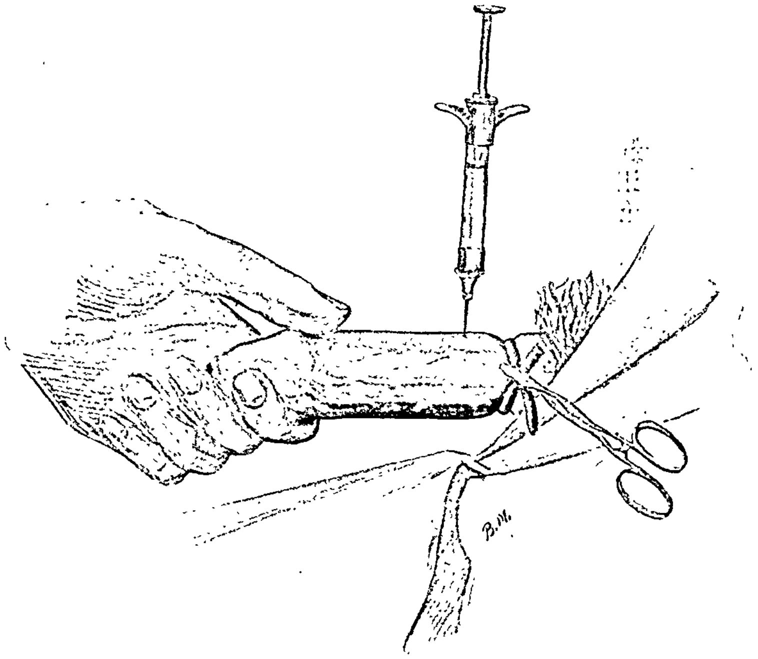
THE OBERST METHOD OF COCAIN INFILTRATION

J. W. MILLER, M.D.
Instructor in Dermatology in the Medical Department of the University of Cincinnati
CINCINNATI

In operative procedures, especially on the penis, it has long been the custom to use cocain solutions subcutaneously. This method has never proved entirely satisfactory for several reasons. Chief of these is edema that was caused in the area operated on with consequent slowness in healing. Another objection that might be mentioned is opportunity for local infection, due to numerous needle punctures. Results were often unreliable, anesthesia not occurring in certain areas because the solution had been placed too deep in the tissues, or for no assignable cause. Even with proper technic pain was frequently complained of, and often a general anesthetic had to be substituted. Although the amount of cocain and morphin injected was small, when solutions as suggested by Schleich were used, the anesthetic was sometimes used in excessive amounts to get desired results, and in order to anesthetize all structures, superficial and deep.



The Oberst method of cocain infiltration.

The technic of the method to be described is extremely simple and results uniformly satisfactory. The injection is not made at the area to be operated on, and edema is thereby avoided. A definite quantity of a weak cocain solution (no morphin) answers in the majority of cases. Pain is never complained of, and overstimulation or depression from the drug does not occur, except possibly in a few cases patients having an idiosyncrasy.

The method indicated is for circumcisions either with scissors (clean cases) or with the galvanocautery knife, which is to be preferred in the case of a chancroidal ulcer, since infection of cut surfaces is thereby prevented and all sutures are done away with. In hard chancres, the organism of syphilis having been found, it is advised to excise the ulcer early, in order to remove source of infection. Patients with a painful paraphimoses, after the usual means to reduce it have been tried, can be painlessly relieved after use of cocain solution injected into the corpora cavernosa. The edematous collar in these cases is cut down on by the blade of the cautery knife, or a grooved director is worked under the constriction and this is nicked with the point of a bistoury. Dissecting out scar tissue and closing a fistulous opening and even amputation of the penis call for this method. For a meatotomy, slitting up urethral lacunæ or Tyson's glands a simple application of a solution is usually all that is required, but one may occasionally have to resort to deep infiltration. The profession is indebted to Professor Oberst of Halle for first suggesting cocain solutions to be used in this way. The manner of introduction is shown in the illustration. A small rubber tube or catheter is placed around the organ at the penoscrotal junction, drawn moderately tight and held in place by artery forceps. The penis is washed with a solution of bichlorid and placed on a clean towel, or preferably a square of white glazed paper. The needle to be used, having been placed in boiling water for two minutes, is attached to a clean syringe, into which is drawn a fresh solution of cocain hydrochlorate 1 per cent. The needle is thrust into the tissue of the corpora cavernosa, and about one-fourth of an ordinary hypodermic syringeful of the solution is deposited (about five minums). It is then withdrawn and about five minims more are placed deep on one side, then on the other side of the penis. Lastly, what remains in the syringe is injected into the under side of the penis. The urethra and the dorsal vein should be avoided if possible. It makes little difference, however, even if these parts are punctured. The most important point to bear in mind is to wait fifteen minutes after making the injection before beginning to operate. It is well to remember that patients will often detect a pin-prick, after acute sensation is lost, but they do not feel the cut of the scizzors or the burn of the cautery if one is careful to postpone work for the above-mentioned period. I have never heard of a case of cavernitis resulting from this method.

In operations on the fingers, in cases of felon, etc., and on the toes as in ingrown nail, this way of producing analgesia is to be preferred to infiltration subcutaneously. It is less painful, for one keeps away from the inflamed parts. Recently I have been using one half syringeful of a 2 per cent solution in some cases, which also acts satisfactorily.

7 East Eighth Street.

PERNICIOUS VOMITING OF PREGNANCY*

ADAM H. WRIGHT, B.A., M.D., M.R.C.S. (Eng.)
President of the Canadian Medical Association; Professor of Obstetrics, University of Toronto
TORONTO, CANADA

We are much indebted to Dr. Whitridge Williams of Baltimore, and his assistants, who have demonstrated, to some extent at least, the nature of the disturbances of metabolism which cause a peculiar toxemia, and pernicious vomiting during pregnancy. Chemical examination of the urine in such cases shows a decrease in the amount of nitrogen excreted as urea, and an increase in the amount excreted as ammonia. Without referring to other changes we may accept the fact that this excess of ammonia excreted, or, as it is called, the ammonia coefficient, furnishes a fair indication of the severity of the poisoning. In normal pregnancy it is 4 or 5 per cent., and in cases of toxemia may rise to 10, 20, 40 per cent., or even higher. Dr. Williams has expressed the opinion that if this ammonia coefficient exceeds 10 per cent., the patient's life is endangered, and the pregnancy should be immediately terminated.

The following history is interesting in certain respects:

Patient.—Mrs. A., aged 27, secundipara, became pregnant early in August, 1908. Nausea and vomiting commenced early in September. Treatment, including the administration of cathartics, sedatives, and enemas of salt solutions, failed to relieve the symptoms. She steadily grew worse until September 30, when the ammonia coefficient was 14 per cent. The most distressing symptom was almost constant nausea which prevented her from eating, drinking or sleeping. The clinical signs, and the results of chemical examination, appeared to indicate the advisability or necessity for the induction of abortion. The maternal instincts, however, were very strong in the patient. She preferred to take great risks so far as her own life was concerned in the interests of her unborn babe.

Treatment and Clinical Course.—It was found that a hypodermic injection of one-quarter of a grain of morphin had no effect, and it was thought that a large dose might quiet those nerve centers, which, like so many specks of dynamite, were causing a vicious circle of explosions within the digestive tract, and especially in the stomach. Consequently one-half grain of morphin was administered hypodermically; and, shortly afterward, calomel was given, one grain every hour for four doses. This treatment produced satisfactory results. The patient had some sleep during the night, and felt fairly well the next morning—better than she had felt for a month before. The nausea returned, however, during the forenoon, and she had a very bad afternoon. It was then decided to give larger doses of morphin. Accordingly one-half grain was administered hypodermically at 9 p. m., one grain of calomel was given by mouth half an hour after, and as the morphin had not produced sleep another quarter grain was administered between 10 and 11 p. m. The patient had a comfortable night, slept well, and felt comfortable and happy the next morning. As the nausea returned each afternoon this treatment was continued for five more nights with such excellent results that on the seventh day from the commencement of this treatment the patient had no nausea or vomiting. During this week she had five grains of morphin administered hypodermically, and eleven grains of calomel by the mouth. Although at this time (October 7) the general condition was vastly improved the ammonia coefficient was still fairly high—8.2 per cent. After this less morphin was administered at bedtime for five days, after which it was stopped entirely. Calomel was given occasionally during the remainder of the pregnancy. After November 1 the patient enjoyed excellent health until she reached full term, May 8. In accordance with my custom, during the last five years of inducing labor at term or within two or three days after, labor was induced May 10, when a healthy child was born. At the time of writing (nearly nine months later) mother and child are both well.

The doses of morphin may seem large to some, but it was hoped that large doses would prove efficient when average doses produced no good effect. It is believed by some (perhaps many now) that half a grain often does good when one-eighth or quarter of a grain does harm. The dose of calomel may also seem large to some. Four grains for a woman with such a stomach, and with such low vitality, might seem a somewhat heroic dose; but in many forms of both toxemia and septicemia, large doses are frequently, if not generally, well borne by those having exceedingly disordered stomachs, and often if not generally do a world of good. If the patient vomits at once after taking one calomel pill, another is given half an hour afterward, and such administration is repeated until eight pills are swallowed in some cases. It would appear that this old-fashioned medicine is the best antidote to certain poisons known to-day.

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* Read before the Toronto Academy of Medicine, March 8, 1910.

It will be noticed that in this case the ammonia coefficient rose to 14 per cent. According to Dr. Williams' rule this pregnancy should have been terminated on or before September 30, i. e., when pregnancy was about two months advanced. Considering that this patient is now a strong and happy mother, with a beautiful healthy babe, such a procedure seems too awful to contemplate. We are learning much through modern physiologic chemistry about the various types of toxemia: but we should be careful to avoid reaching mathematically precise conclusions regarding exceedingly serious questions on insufficient data. We had hoped that the investigation of careful, conscientious workers outside of Baltimore had proved the incorrectness of this 10 per cent. rule. We find, however, that so high an authority as Sir John Byers, of Belfast, tells us[1] that he agrees with Whitridge Williams that "if this ammonia coefficient rose to 10 per cent., one might conclude the case was toxic, and one should empty the uterus as soon as possible."

It should be understood in this connection that emptying the uterus in a case of pernicious vomiting of pregnancy is one of the most dangerous operations in obstetrical surgery. There have been a number of heartrending tragedies in Toronto from this cause during recent years. Certain healthy, happy brides, after short illnesses from pernicious vomiting of pregnancy, died so suddenly after the induction of abortion under chloroform anesthesia that the grief-stricken relatives had not time to say farewell. In connection with these serious cases two things should be kept in mind: (1) that the administration of chloroform is exceedingly dangerous: and (2) that forcible dilatation of the cervix is perhaps still more dangerous. Therefore, the modern operation of emptying the uterus "at one sitting" should not be performed. The common statements by experts that this "operation is practically free from danger provided perfect asepsis is observed" is woefully incorrect in such cases. The safest method is Dührssen's vagino-uterine tamponade or some modification of it. It is unfortunate that it happens in a rtain proportion of cases that the emptying of the erus, even if done before it is "too late," so far as our present knowledge can indicate, and in the most careful way by a skilled expert, is followed by no improvement. The patient simply continues to grow steadily worse until death ensues from exhaustion. Notwithstanding such dangers we probably all agree that in certain cases the induction of abortion is absolutely indicated. The practioner in charge, when in doubt, should have a consultation as soon as possible, and should act promptly if such an operation is decided on.

Dr. Williams has adopted the following classification: reflex, neurotic, and toxemic vomiting of pregnancy. As it is generally conceded now that in the nausea and vomiting there is always some disturbance of metabolism it seems rational to drop the terms "reflex" and "neurotic," and consider that in every instance toxemia is the cause of the condition produced. This would tend to prevent carelessness on the part of those practioners who consider that in the great majority of cases the nausea and vomiting are simply "neurotic" or "sympathetic," and that treatment can accomplish no good. So far as our present knowledge goes it seems well to consider that there are various types of toxemia of pregnancy, of which the principal are: (1) acute yellow atrophy of the liver; (2) pernicious vomiting; and (3) that form of autointoxication that produces eclampsia. One of the advantages of grouping these three varieties in such a way is that it simplifies matters much for general practitioners. This is true especially from a therapeutic standpoint because the eliminative and sedative treatment is suitable for most of the symptoms that appear in all varieties. It is somewhat interesting to note that the treatment carried out in the case here reported is very much like that of British obstetricians fifty years ago.

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CEREBRAL SYPHILIS

A CLINICAL REPORT OF SIX CASES WITH SUGGESTIONS AS TO TREATMENT

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The object of this short paper is to call attention to the course and prognosis of syphilis in certain patients who may present many of the physical and mental characteristics of general paresis, and yet, unlike sufferers from paresis, are to a certain extent amenable to antisyphilitic treatment.

These cases are more common now than they were a decade ago. This is probably due to the ever-changing character of the two factors which cause their development—"syphilization and civilization." Secondly, this increased frequency is also doubtless due to our ever-increasing skill in diagnosis. There can be but little doubt that the specific case of to-day differs from the one of twenty years ago.

The following case is a typical one.

Case 1.—*History.*—J. A. G., came into my office with the story that for the previous six months his business associates and the employees in his office had noticed a change in his general conduct. He tried to accomplish more work than formerly. He often made mistakes in language. Next, his memory began to be slightly affected, and he was unable to remember events of recent occurrence. He was not irritable, but was confused. He showed considerable difficulty in going about, so that his friends in the town where he lived spoke about his lameness and his inability to use his legs.

Examination.—Finally, he was brought to my office, and when he came in his pupils reacted sluggishly and were almost Argyll-Robertson; the knee-jerks were much exaggerated; he was ataxic in both arms and legs. His speech was considerably ataxic. He had no tremors. His mental condition was one of great confusion, depression and inability to comprehend his surroundings. His clothes were soiled, his person was unclean, and as he stood up talking to me in the office he passed water right on the floor, and yet did not seem to be cognizant of the fact and in no way apologized for what he had done or seemed to realize that his clothes were in any way soiled. During the whole examination he manifested practically no interest in the preceedings and asked no questions; in fact, did not seem to care what symptoms he showed or what opinion was given. His wife and brother were present at the examination but he paid no attention to them. His handwriting was practically normal; there was no evidence of tremor and his ability to add was adequate.

Diagnosis and Treatment.—I made a diagnosis of general paresis and advised his family to make arrangements to take him away from business and have him treated. His family physician and I thought, as a matter of precaution, and more as a general routine than anything else, that it would be wise to put him on antisyphilitic treatment. We gave him mercury in the form of inunctions every night, and iodid in moderate doses, steadily increasing. For the next week the patient was not so well. At the end of ten days his wife began to notice that he was able to walk a little better, and, as she said, the gait was more of a shuffle now, and not nearly so ataxic. The next thing his family physician noticed was that the pupils became very much smaller in size and gradually at the end of a month began to respond to light. He still presented the Romberg symptom. The left knee-jerk was decidedly less active than it had been three days before. He was able to answer questions as to the location of certain cities and rivers in the country.

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[1] Byers: Brit. Med. Jour., Feb. 19, 1910.

Subsequent Course.—I then lost sight of the patient but heard that the improvement continued steadily but slowly. The pupils came down to normal in size and reaction, knee-jerks became practically normal, the Romberg disappeared, the gait became normal, and two years afterward the patient was back at his business, attending to it regularly, and considered himself in good condition both physically and mentally. He complains a little of difficulty in walking, and that his memory is not quite as good as it used to be, but his business associates think he carries on his business well, and every one associated with him seems to consider that his condition is as good now as it ever was. During all this time he has taken large doses of both mercury and iodid.

CASE 2.—*History.*—S. H. M., referred to me by Dr. S., is a lawyer and has worked fairly hard. He gradually became a little confused, and one night was found wandering about his house in an aimless manner, not knowing where he was going or what he was doing. He was taken to his family physician who advised that he be sent to a specialist.

Examination.—When he came to me he had unequal pupils, a marked facial tremor, a considerable lack of expression; knee-jerks were very much diminished; no Romberg. The patient took little interest in his surroundings and did not pay much attention to what was being done; did not seem to care much as to his future disposition, although he was several hundred miles away from home, and did not manifest any desire either to remain where he was at the time or to return home.

Treatment and Course.—The patient was given inunctions of mercury and put on iodid, starting at 35 drops and gradually increasing it up to 300 drops a day. He was under my observation for two years, and during that entire time steadily improved. The improvement was slow in his case; I gave him very little mercury; for a whole year at a time he got no mercury at all, but continued on large doses of iodid. At the end of two years he felt that he was very much better and asked to go back to work. He was depressed and restless on account of doing nothing. He began to notice that his clothes did not look as nicely as they ought, called attention to the fact that his finances were running low and that he must get back to work. He was able to carry on his business well. I then increased the amount of mercury that he was getting and his improvement became much more rapid. Three years afterward he was actively engaged in his law business. The ophthalmoscopic examination was negative.

CASE 3.—*History.*—I. S., referred to me by Dr. H., was a single man, aged 30, who had complained of inability to concentrate, loss of memory, failure to use his mind as formerly, sleeplessness and considerable depression. He denied both alcohol and syphilis.

Examination.—The physical examination showed unequal pupils, a slight facial tremor, a marked Romberg and knee-jerks unequal. From the story which the patient told, both his family physician and myself agreed that there were strong reasons for thinking he had a specific history.

Treatment and Course.—He was put on large doses of iodid and injections of mercury. The improvement was rapid and considerable. In two months the pupils became equal, the tremor and Romberg symptoms disappeared and the knee-jerks quieted down. The mental symptoms cleared up to a very considerable degree, although there still remained some of the lack of confidence and depression. The ophthalmoscope showed nothing abnormal.

The special symptoms to which I wish to call attention in these three cases are, facial tremor, mental confusion and the absence of a typical Argyll-Robertson pupil.

All three patients improved very considerably; two to so great extent that they were enabled to return to their work; the third is steadily getting better. The symptom which showed the greatest improvement in these patients was the mental condition—the return to normal from the period of confusion and depression. It is noteworthy that in none was there any feeling of well-being, and in this respect they differed from the classic types of general paresis.

CASE 4.—*History.*—T. H. B., aged 35, was in bed when I was called in consultation. His walking had become difficult; it was practically impossible for him to get about. He had no tremor; the pupils reacted; he was very ataxic; could not pass his urine and complained of paresthesia over one entire side. The knee-jerks were slightly overactive; the mental symptoms were marked; he was suspicious, unclean, careless and his judgment was defective.

Treatment and Course.—He was given large doses of iodid and hypodermic injections of mercury. At once he began to improve. He now is able to walk about, of course, somewhat imperfectly. His urinary function has improved considerably. His hypochondriasis has diminished and he now gets down to his office. His judgment, I must say, although by no means good, is yet very much better. The ophthalmoscope showed nothing.

CASE 5.—*History.*—The patient, aged 35, admitted both specific and alcoholic history. He had never done any work and never assumed any responsibilities other than those incumbent on a student. At the time at which he consulted me he was suffering from headaches, and shortly afterward he developed a condition of somnolence and almost stupor. The pupils were unequal and slow to the light reflex; the knee-jerks were exaggerated. There was neither Romberg nor facial tremor. Mental symptoms were present and were somewhat like the others—a lack of confidence, and a weakness of the higher faculties. The ophthalmoscopic examination was negative.

Course and Treatment.—This latter case was, of course, complicated by the alcoholic habit. This might, therefore, have accounted for the unequal pupils and the tremor. The point here to be noticed, however, is that this patient improved, not under abstinence from alcohol, but in spite of its use, with the aid of mercury and the iodid. He took inunctions of mercury for some weeks and very large doses of potassium iodid. This patient has improved more than any of the others; he has gained a great deal in weight, and in appearance; his judgment has improved. This improvement has persisted now for five years. He still takes both of the antisyphilitic remedies.

CASE 6.—*History.*—W. B., aged 32, a business man, admits specific history but has been moderate in the use of alcohol. This patient complained of being unable to concentrate as well as formerly. He was nervous and irritable. At home the children annoyed him. His sleep was restless; he had phobias. He felt that he was not doing as well as he ought to and that his judgment in business affairs was not as good as formerly. He had in the last few weeks noticed pains in his legs.

Examination.—The physical examination showed pupils that were pin point and unequal; the reaction to light was normal in the left pupil; in the right, sluggish. There was a decided facial tremor; no Romberg; the knee-jerks were normal; the memory was bad: there was an inability to pronounce certain words. The handwriting showed nothing and he was able to figure correctly. The ophthalmoscopic examination was negative.

Treatment and Course.—This patient was placed on large and steadily increasing doses of potassium iodid. He took as high as 375 grains a day. Its use was continued almost without intermission for over five months. At the end of that time the physical signs had completely changed. The mental signs had improved, the appearance of the patient was better, he spoke clearly, his judgment was good, and he felt better.

This last was in many ways typical. The complication of alcohol was too slight to be taken into consideration. The only other feature to be noted was that this patient improved without mercury. He subsequently took mercury and the improvement continued.

It will be noticed that all of these cases developed in the third decade of life. This is in exact accordance with the statistics collected by Gowers. It seems, as Berkeley says, to disprove the commonly accepted belief that cerebral syphilis is one of the late manifestations of the infection. It may be delayed for more than forty years after the initial lesion, and, on the other hand, according to Gilles de la Tourette, it has been known to begin within one month after the date of the infection.

SUMMARY

The group of symptoms which these cases present is twofold in character, physical and mental. These occur in men about 35 years of age, who have contracted the disease *probably* fifteen years before.

The physical signs consist of changes in the reflexes, both of eyes and knees, the Romberg symptom, and the tremor of the facial muscles. The mental symptoms consist of a lack of confidence, a loss of judgment, a sense of depression, and inability to perform regular work; a certain amount of mental deterioration, degradation and confusion. These patients do not care for their personal appearance; their clothes are not neat; their shoes are never cleaned; they do nothing; they are hypochondriacal.

Every one of us will, I think, find that he has met cases of this character. My contention is that we are not sufficiently on the alert for them and that when we do meet them we dismiss them as cases of general paresis. Now these cases may be instances of general paresis and by this very abatement prove that they are paretics. But if they do abate over a period of several years, and if they are well enough to return to their business, they certainly differ in degree from the typical paretic. To the layman, and also to a great extent to the medical man, the word "paresis" is a synonym for incurableness and hopelessness. Therefore, I am contending for a hange of nomenclature. The word "paresis" ought to e reserved for the well-marked and well-advanced stage of the disease. These so-called incipient paretics ought to be assigned to a different class—a class in which not only name but also treatment and prognosis hold out some definite and more marked rays of hope.

From a review of these cases it will be seen that the best results have come from large and systematic dosage of the iodid and mercury. The mercury can be given either by inunction or by hypodermic injection. The latter is the preferable plan from the point of view both of the patient and of the physician. The dosage can be made more exact, and it enables the physician to keep a constant supervision over the patient. The iodid should be begun in doses of from 25 to 35 drops a day and steadily and rapidly increased to 300 or even 400 drops. Another important factor in the improvement of these patients is the environment. They ought to be surrounded in every way with what is agreeable and congenial. Exercise and diet should be carefully regulated. Such patients also require a great deal of rest and do better with long hours in bed.

54 West Fiftieth Street.

Persistent Foramen Ovale.—Symptoms of a defective foramen ovale can exist for many years without causing cyanosis, thus refuting the theory of the admixture of arterial and venous blood causing cyanosis. There has been reported a case of complete absence of the intra-auricular wall. This patient lived to the age of 39 years. Physical signs are frequently absent in these cases of defect cordi.—L. T. Rawles, in *Journal of the Indiana State Medical Association.*

ANIMAL EXPERIMENTATION IN RELATION TO OUR KNOWLEDGE OF SECRETIONS, ESPECIALLY INTERNAL SECRETIONS*

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(Concluded from page 1437)

FACTS ESTABLISHED

Looking over the mass of facts which we have recorded in the foregoing pages, we find in the first place that the investigations of recent years have established definitely that the thyroids, the suprarenal capsules and the hypophysis are vital organs of immense importance. Furthermore, for the thyroid it was found that its extract can nearly compensate the absence of the organ. For the adrenals it was found that they furnish a very effective, therapeutically extremely important extract; this extract, however, cannot supplant the organ. The hypophysis furnishes a moderately effective extract, and this by a part which seems to be not indispensable for the life of the animal. All three glands seem to consist anatomically of two parts, of the mutual functional relations of which we know nothing definite. We know nothing of the significance and importance of the cortex of the suprarenal capsules and we know little about the posterior part of the hypophysis. We know a great deal of the importance of the newly discovered mate of the thyroids, the parathyroids, but as to the mutual relations of these neighbors we have for the present only theories, and as many as the subject permits; they are synergists, they are antagonists, and they are indifferent to one another. As to the mode by which these glands affect the life of the organism, there can be no doubt that it is accomplished by means of an internal secretion; that is, something of importance is prepared within the gland which comes in contact with the blood without the intervention of a special duct. As to the way this takes place we have again a variety of theories: each of the glands sends to the blood a specific substance which the body needs for its existence; the glands send to the blood an ingredient which neutralizes poisonous specific substances accumulated there; and, finally, specific poisonous substances are attracted to the various glands where they become detoxicated. These theoretical disagreements were and are important factors in the development of the details of our knowledge of these subjects, inasmuch as in the efforts to prove the correctness of one theory or the other a great many important facts were and are being brought to light by the supporters of the various theories.

THE INTERNAL SECRETION OF OTHER GLANDS AND ORGANS

The inspiring experimental activities in the studies of the internal secretion of the ductless glands stimulated similar investigations in other organs and brought to light the important fact that organs which have a definite function or even a definite external secretion may at the same time affect the body in a well-defined manner also by an internal secretion.

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* This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Thirteen of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, surgery, internal secretions, protozoan tropical diseases, etc.

INTERNAL SECRETION OF THE PANCREAS

This became manifest especially in the discovery of the relation of the pancreas to diabetes. Here, again, clinical medicine led the way. On the basis of his own observations and those of former medical writers Lancereaux,[52] in 1877, assumed that the so-called meager diabetes is connected with a diseased condition of the pancreas. The same view was taken subsequently by some other clinical writers. In 1889 von Mering and Minkowski[53] published their discovery that the complete removal of the pancreas in dogs leads to a most striking development of diabetes. The facts were soon worked out at great length by Minkowski[54] and were confirmed by numerous writers. The main facts are as follows: Complete removal of the pancreas leads to a fatal glycosuria in all animals except fowls, in which it leads only to a hyperglycemia.[55] Ligation of the pancreatic duct does not produce diabetes. The diabetes is completely prevented when one-fifth of the pancreas is left behind, no matter where this remnant is placed, provided it preserves its vascular connections with the body. Extracts of pancreas are of no avail when the pancreas is completely removed. There is no doubt that the control of the carbohydrate metabolism in the body by the pancreas is accomplished not by its external secretion, but by an internal secretion which is confined to the pancreatic gland and is thus specific. Whether this latter secretion is produced by the same cells which provide the external secretion or by a different set of pancreatic cells, for instance, the groups of cells which are known as the islands of Langerhans, is a problem which is still within the stage of theories. It was a great discovery—a sudden flash of light in that dark labyrinth of physiology and pathology of carbohydrate metabolism. It led to numerous investigations and to the unravelling of a great amount of important detail, which, of course, we shall not attempt to discuss here. I wish only to add the remark that this great work was carried out and is being carried on essentially by modern clinicians well versed in experimental methods.

INTERNAL SECRETION IN THE ORGANS OF GENERATION

The well-known interdependence of the various organs of generation, which in the past was generally ascribed to the regulation by a nervous mechanism, is now recognized as being essentially a chemical coordination managed by the internal secretions of these organs. Instances of such chemical coordination are: the dependence of the secondary sexual characters on internal secretion of the testicles[56] and ovaries;[57] the dependence of the growth of the uterine mucous membrane in pregnancy on the internal secretion of the ovary and the corpus luteum;[58] the development of the mammary glands in pregnancy under conditions in which the activity of the nervous system is excluded; for instance, when the ovary is transplanted in the peritoneum or at the base of the ear,[59] or after the removal of the spinal cord.[60] Starling and Lane-Claypon[61] succeeded in producing the development of mammary tissue in virgin rabbits by injections of extracts made of fetal tissue. The fetus while in the uterus transmits to the maternal body a substance which accomplishes two purposes: it stimulates the growth of the mammary glands and prevents the cells of these glands from resuming their specific secretion. With the removal of the fetus from the body at a period when the glands reached a certain definite stage, the glandular cells begin to secrete milk. This means that the mission of the internal secretion might sometimes consist in the inhibition of a certain function.

SECRETIN

By the discovery of secretin[62] a new type of internal secretion came to light. Through the work of Pawlow[63] it became known that the presence of hydrochloric acid in the duodenum causes a greater flow of pancreatic secretion. It was presumed that the acid produced this effect by stimulation of peripheral nerves in the duodenum and the increased pancreatic secretion was simply a nervous reflex. Bayliss and Starling, however, discovered that an extract made of the duodenal mucosa under addition of hydrochloric acid causes an increase in the flow of pancreatic juice. This extract the authors named secretin. Boiling the extract does not destroy its effectiveness. Bayliss and Starling assume that under normal conditions after the entrance of the hydrochloric acid into the duodenum a similar extract is prepared within the epithelial cells. This extract is normally given up to the circulation which carries it to the pancreas and causes the external secretion of that gland. These authors believe that secretin is the only inducing cause of pancreatic secretion. Other physiologists, however, believe that the secretion of the pancreas is also under the control of the nervous system.

It seems to me that there are well-established clinical facts which speak definitely against the sole control of the pancreatic secretion by secretin. In cases of achylia gastrica no acid is secreted within the stomach and none, therefore, reaches the duodenum; consequently no secretin can be formed. Nevertheless the digestion of various foodstuffs occurs in these patients in a practically normal way within the intestines, which, of course, would be impossible if pancreatic secretion depends exclusively on stimulation by secretin.

While secretin is thus a useful factor in the animal mechanism, its presence is not indispensable for the life and health of the animal. It may be mentioned that secretin has, in common with the extracts of the thyroids, adrenals and hypophysis, the property of not being destroyed by digestion or by heating (when not prolonged).

It is stated by Edkins[64] that also the cells of the mucosa of the pyloric part of the stomach manufacture a secretin (gastrin) which stands in close relation to the secretion of the gastric juice.

Besides the above mentioned results there are many interesting investigations which deal with the mutual relations of these various internal secretions, for instance, the relation of the hypophysis to that of the thyroids or to that of the sexual functions, or the mutual relations of the internal secretions of the pancreas, adrenals and thyroids, and many more problems. All these investigations which we cannot discuss here open up new fields and are full of promise of scientific and practical results.

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[52] Lancereaux: Bull. de l'Acad. de méd., Paris, 1877.

[53] Von Mering und Minkowski: Arch. f. exper. Path. and Ther., xxvii.

[54] Minkowski: Arch. f. exper. Path. and Ther., xxxi.

[55] Kausch: Arch. f. exper. Path. and Ther., xxxvii.

[56] Shattock and Seligmann: Jour. Physiol., xxix.

[57] Marshall and Jolly: Phil. Tr. Roy. Soc., London, 1905, cxcvi.

[58] Fraenckel: Arch. f. Gyn., 1903, lxviii.

[59] Ribbert: Arch. f. Entwcklngsmechn., 1898.

[60] Goltz and Ewald: Arch. f. d. ges. Physiol., Bonn (Pflüger), lxv.

[61] Lane-Claypon and Starling: Proc. Roy. Soc., London, 1905, lxxvii.

[62] Bayliss and Starling: Jour. Physiol., 1902, xxviii.

[63] Pawlow: Die Arbeit der Verdauungsdrüsen, 1898.

[64] Edkins: Jour. Physiol, xxxiv.

DISTINCTION BETWEEN INTERNAL SECRETION AND WASTE PRODUCTS

The internal secretions with which we have dealt so far have in common a few important characteristics which ought not to be lost sight of. In the first place, all these secretions are traced to organs which are provided with definite secretory elements. In the second place, there are good reasons for assuming that in each of these organs the respective secretions are the main products of the specific affinity of the secretory elements and not by-products (waste) secondary to another, chief activity of these elements. Furthermore, each secretion is specific for each organ. For instance, antitetanic activity is exercised only or essentially by the parathyroids, and glycolysis only or essentially by the pancreas.

However, the term internal secretions, as it was introduced by Brown-Séquard in 1891[65] and as it is now frequently used, is meant to cover also a variety of products which have in common with the before mentioned secretions only the fact that they are carried away from the place of their production through the blood or lymph capillaries and not by special ducts. It is true that the waste products of the testicles, of the kidneys, of muscles, and of other organs and tissues, which are thus included under the term of internal secretion, have, of course, to get first into the circulation before they can be eliminated from the body. And it is further true that, since they have to linger a little while within the organism before they can be completely eliminated, the fluids and tissues of the animal body become somewhat adapted to them and often form definite reactions to protect the body against their deleterious influence. But while by the presence of such reactive mechanisms the impression is created that these waste substances are integral parts of the living organism, the fact should not be lost sight of that they are poisons, harmful to the body, and that the mechanism of the body with regard to them is arranged to defend it against them, to neutralize their poisonous effects and to hasten their removal from the body. What logical and practical advantage can there be in the attempt to class these waste products together with the internal secretions with which we have dealt before? It is probable that the very aim of some of these secretions is to protect the body against some of these waste products.

Let us take CO_2, a waste product of the importance of which recently a great deal has been said and written. When muscles are contracting CO_2 is formed. This gas, however, is not secreted by the muscle cell and its production is not the functional object of the muscle fiber; it is here only a secondary, a waste product. This gas is produced also by the activity of any other cells, for instance, in the secretory activities of the glands. It is not secreted by them, either, and its production is not the function of the gland cell; it is here also merely a waste product. Its production is, therefore, not confined to any specific cell, tissue or organ. In the assumption of Bohr that CO_2 is secreted by the epithelial cells of the pulmonary alveoli, the term secreted is simply misapplied; it is meant that there is a vital action in the removal of the gas. A cell secretes only what is new; the epithelia of the alveoli do not create CO_2; they only hasten its removal by some vital action. That these epithelia, as well as the endothelia of the capillaries, are provided with such vital power demonstrates that the organism is provided with special mechanisms for the speedy, infallible removal of that gas, the most deleterious waste product. Now a great deal of stress has been laid on the theory or fact that the respiratory center is greatly stimulated by CO_2. What does this specific irritability of the respiratory center signify? Again, nothing else but that the body protects itself by making the respiratory center so sensitive and so reactive against this dangerous waste product that any surplus of it automatically sets going a well-working mechanism for its rapid elimination. That the animal organism is provided with sensitive mechanisms for the effective removal of a substance can surely not be taken as an evidence of the necessity and importance of this substance to the life and economy of that organism. We know now that the animal organism is provided with numerous effective defenses when invaded by bacteria or other foreign injurious substances. Will any one claim that the existence of these well-organized means of defense within the body is a proof that these bacteria or deleterious substances belong to the economy of the animal body? The animal possesses, on one hand, a variety of organs to provide it with certain specific products (secretions) to maintain its life, and, on the other, it possesses various other mechanisms for the purpose of maintaining life by the effective removal of other products? Can the contrast between the two kinds of products be greater? I cannot see that any progress can come from a generalization which tries to unite such heterogeneous products under one head. It is only capable of obscuring the issue. At any rate I would strongly advocate confining the term internal secretion to specific secretions of organs which are provided with definite secretory elements.

SUMMARY

Let us now summarize the main facts of importance we have learned in the recent experimental studies connected with the problem of internal secretion.

1. It became established that the thyroids, suprarenal capsules and hypophysis are vital organs, the removal of which means ruin to the animal organism. Only three decades ago they were considered as useless remains.

2. Little bits of definite tissue, the parathyroids, were recognized as vital organs, the removal of which is fatal to the animal. Their very existence was completely unknown thirty years ago.

3. New diseases were recognized in connection with the impairment of these organs: myxedema, acromegaly, etc.

4. The real nature of cretinism was recognized.

5. Great theoretical and practical lessons were learned with regard to extracts prepared from these ductless glands; the results are of considerable theoretical and practical importance. We need only refer to the striking effect of the thyroid extract in the treatment of natural and artificial (surgical) myxedema and cretinism, and to the great usefulness of adrenalin in hemostasis, or in sthenic conditions. Valuable practical therapeutic results were recently obtained also from the extract of the hypophysis.[66] There is no doubt that even from a purely therapeutic point of view the lessons learned in this short period of three decades by the methods of experimental medicine compare favorably with all the lessons learned in therapeutics by the empirical method for many past centuries.

6. It was discovered that organs with a definite external secretion may exert also another function by means of internal secretion. Especially important was the discovery that the removal of the pancreas leads to diabetes. In the innumerable observations dealing with the exas-

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[65] Brown-Séquard: Arch. de physiol. norm. et path., 1891.

[66] Bell, W. Blair: Brit. Med. Jour., 1909, ii.

perating problem of diabetes this discovery is an immense step forward, although the goal is not yet in sight.

7. A new type of correlation by means of internal secretion was learned, namely, that organs participating in a common complex function are capable of controlling their coordination by means of an internal secretion: the interrelations of the organs of generation and the relations of the duodenum to the secretion of the pancreas (secretin).

8. An important lesson was learned, that the organs which exert an influence on the mechanism of the body by means of an internal secretion are provided with an abundance of factors of safety; that is, they possess of the specific vital tissues a good deal more than the animal needs for its immediate maintenance.

9. Surgery learned many valuable lessons. In the first place it learned that radical operations on these organs are invariably ruinous to patients. It learned further, however, that a favorable result can nevertheless be obtained by leaving in the body a comparatively small vascularized fragment of the organ. Surgeons have learned the difficult task in removing goiters of avoiding interference with the parathyroids and their vascular supply; they are learning how to reach and remove tumors of the hidden hypophysis, and they are learning to mend the evils of an unavoidable radical removal of one of these organs by grafting such an organ or a fragment of it in various safe places in the body.

These results surely mark an immense scientific and practical progress. Remembering that it was made within a brief period of less than three decades, and remembering further the dense ignorance which reigned in this field for centuries, even the most superficial observer must admit that the progress is truly marvelous. Furthermore, the observer must readily admit that the acquired results are not luxurious contributions to abstract science, but consist of elementary indispensable knowledge in the domain of medicine.

THE LESSONS TAUGHT

There are many valuable lessons that we may and ought to learn from the history of this chapter of modern medicine.

In the first place nearly every fact of importance in this chapter, as was pointed out before, was learned by the purely biologic method of research, and experimentation on animals had the lion's share in it. It is self-evident that none of the fundamental facts could have been discovered by any other method.

Furthermore, the results were achieved largely through the harmonious cooperation of medicine, surgery and experimental medicine. Experimentalists and physiologists should remember that it was the observation of the clinician Addison which set Brown-Séquard to work experimentally on the suprarenal capsules; that it was the clinical observations of Oliver which led to the discovery of adrenin by Schaefer and himself; that it was the observations of the clinicians Gull and Ord, on one hand, and of the surgeons Kocher and Reverdin, on the other, which contributed greatly to the establishment of the vital importance of the thyroids; that the clinical observations of Marie led to the recognition of the hypophysis as a vital organ; that the clinical statements of Lancereaux and others were the forerunners of the experimental discovery of the internal secretion of the pancreas. The physiologists should also remember that it was Schiff and Brown-Séquard who were instrumental in the establishment of the vital importance of the ductless glands, experimenters who did not enjoy the full approval of the official physiologists of their time, and that most of the experimental work on internal secretion was at least first carried on essentially by experimental clinicians and surgeons, and that such eminent physiologists as Munk and Pflüger were and still are fighting the teachings of internal secretions, which can be explained only by the deep-rooted distrust of physiologists of the mechanical school of any results obtained by purely biologic methods.

It deserves to be pointed out that some of the results owe their origin to mere hypothesis. It was the hypothesis of Felix Semon of the similarity of the phenomena in the clinical observations of Ord and the surgical results of Kocher which led to the formation of the committee of the London Clinical Society, and it was the report of this committee which definitely established the importance of the thyroid to life. The hypothesis of Gley of the relations of the parathyroids to the thyroids, though probably incorrect in its original conception, led to the establishment of the fact of the antitetanic function of the parathyroid.

On the other hand, it ought to be evident that neither hypothesis alone, nor even clinical or surgical observation, is capable of uncovering the whole truth. Mere observations and ingenious hypotheses give the stimulus and create the problem; its solution can be hoped for only by animal experimentation. Sometimes surgery initiates also a solution of the problem; but we must keep in mind that when surgery teaches a lesson it has already made an experiment, and often a futile one, on a human being! The history of the radical operation for goiter should be a lesson to all surgeons that progress in surgery must be preceded by animal experimentation; otherwise it may sometimes mean ruin to human life.

The experimental history of the ductless glands teaches us the impressive lesson not to rely on a few experiments, or on experiments made only on one species of animals, or carried out by only one experimenter. The experiments made by Phillipeaux and by Harley on white rats postponed the discovery of the vital importance of the suprarenal capsule for thirty years. Contradictions between experimenters should not discourage further investigation; on the contrary, it often indicates the presence of an important fact not even looked for. Neither should an apparently satisfactory solution prevent us from reinvestigating the problem. When the chapter on the thyroid seemed to come to a beautiful close by the discovery of the curative effect of its extract, it surely appeared to many that the problem was satisfactorily solved. Nevertheless further experimentation disclosed soon the surprising fact that in all the foregoing experiments and observations two organs instead of one was dealt with. Re-examination of seemingly well-established facts is one of the best means to further scientific progress.

For hundreds of years the functions of the ductless glands were shrouded in deep mystery. In less than three decades a flood of light was shed on these and allied functions by animal experiments in harmonious cooperation with medical and surgical observations. Can any person with a sane judgment be in doubt as to the usefulness of modern experimental medicine?

Rockefeller Institute for Medical Research.

Polyuria.—Polyuria should make one suspicious of diabetes, remarks C. W. Bonney, in the *Therapeutic Gazette*, and the urine of those who complain of it should always be examined for sugar.

SOME MODERN IDEAS OF CANCER*

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DETROIT

There is no doubt that cancer, in various forms, was prevalent even in the day of Hippocrates (470-361 B. C.); and his famous maxim, "What drugs fail to cure, that the iron (or knife) cures; what iron cures not, that the fire cures; but what the fire fails to cure, this must be called incurable," might well be considered as having been applied to certain superficial forms of this disease. Later, Claudius Galen (131-204 A. D.) showed by his writings that he regarded this disease as a result of the accumulation of one or other of the various humors, while Guy de Chauliac (1300 A. D.) declared that cancer was closely allied to leprosy and advocated the use of the thermocautery in the superficial forms.

Such observations, made centuries ago, beginning even with the earliest knowledge of medical problems, must prove to us of the present day that our medical forefathers were keen observers and fully deserving of the respect that their memory inspires. Especially is this true when we stop to consider that our present conceptions of pathology are not based so much on the gross changes observable in the patient as on a knowledge of the changes which occur in the separate tissue cells; observations of such a nature as have been rendered possible only through the discovery and perfection of the microscope. This instrument, essential to our understanding of disease processes, is said to have been discovered by Jansen about the year 1620, but its development for practical use took place no farther back than the beginning of the nineteenth century. Thus we can see that, while the clinical observance of tumors and their malignant characteristics covers a period of possibly two thousand years, yet our conception of their true etiology must be limited to the comparatively short duration of microscopic knowledge. Before this era, it must have been an absolute impossibility for a practicing physician, no matter how skilful, to differentiate absolutely between cancer and some forms of infectious granulomata, such as syphilis and tuberculosis. Even with the present advanced means at our disposal, the question frequently arises, "Is this section one of sarcoma or of a chronic infection?"

Hunter (1728-1793) is credited with being the first man to study the minute structure of tumors. He recognized the similarity between tumors and normal tissues and stated that tumors are the result of a modification of the formative process. However, but little attention was given to his work, for early in the nineteenth century the theory that all tumors were simply forms of chronic inflammation was proposed by Broussais and met with general acceptance.

Early in the eighteenth century Boerhave ascribed the origin of tumors to the lymphatic system, then newly discovered. Cancer, in his opinion, was the result of a degeneration of the lymph.

The perfection of the microscope to a sufficient degree for use in histologic work was not attained until after 1830, and the first important work on cancer from a histologic standpoint was published by Müller in 1838. All modern ideas concerning the etiology of cancer must date from this period, and then, as now, the profession was divided, one portion favoring the microbic theory, the other that of cellular derivation. Of the latter Müller himself was a firm advocate. Müller, however, believed that all tumor cells were derived from a formative fluid that escaped from the blood, an idea probably retained from the Boerhave school, and it was not until 1858 that Virchow applied his famous aphorism, "*Omnis cellula e cellula*," to the etiologic view of tumors.

Every theory, and there have been many, which maintains a truly autogenous basis for the development of new growths, depends on Virchow's maxim as a foundation. From this sprang the doctrine of Cohnheim, which well explains many tumor formations, such as dermoid cysts and enchrondromata of the testicle. Cohnheim believed that during the earlier stages of embryonic growth more cells were produced than needed. In consequence, some cells were left which possessed the power of reproduction to a marked degree. These "rests," as they were termed, might lie dormant for many years, only to spring into active growth when favorable conditions presented, thus forming a strictly embryonic new-growth even in late adult life.

Previous to this Virchow, who was a keen clinician as well as a laboratory observer, had brought forth his mechanical irritation theory. Attention was called to the frequent occurrence of cancer of the lip in pipe smokers, cancer of the scrotum in chimney sweeps, and the association of carcinoma of the gall-bladder with gall-stones, while recently much has been written concerning the relationship between gastric ulcer and cancer of the stomach. Bashford, in the latest report of the Imperial Cancer Research Institute, has further demonstrated the relation of chronic irritation to the production of epithelioma. He calls attention to the fact that in Kashmir, where the natives wear next to the skin of the abdomen an oven containing burning charcoal, carcinoma of the skin at the point of contact is frequent; and that in Ceylon and India many women suffer from carcinoma of the inside of the mouth, which fact he attributes to the chewing of betel nut and the practice of sleeping with the plug in the mouth. There are also frequent examples of the occurrence of cancer following the repeated exposure of the same portion of the body to the influence of the *x*-ray.

It is of interest to note that one form of occupation cancer is at present markedly on the decrease since the occupation itself has almost disappeared, that is the scrotal cancer of chimney-sweeps, which was so common in the seventeenth century. At present scrotal cancer is a rather rare occurrence.

Ribbert, following Cohnheim's lead, proposed a rather original theory as to the etiology of cancer. He had observed that reproduction of epithelial cells always proceeded from those that occupied a basal position, and also that when an epithelioma occurred the sharp boundary between epithelial cells and the underlying connective tissue cells was lost, the epithelial cells infiltrating through the underlying stroma. He stated that the connective tissue loses its normal resisting power, or "tissue tension," as he termed it, thus allowing the epithelial cells to multiply abnormally. This theory, founded on observation, depended chiefly on a mechanical basis and, while ingenious, it is highly improbable and does not conform with the facts of the disease.

Still another attempt to explain the cause of cancer from an autogenous source places the blame on the trophic nerve system. By the followers of this doctrine the idea is set forth that a chronic irritation causes a destruction of the trophic nerve endings at the point of irritation. This, in turn, allows the cells to grow without any governing power, their over proliferation being the result. In every disease condition the cause of which is obscure, the nervous system has ever been accused by some of being the factor responsible. In all conditions, so far, experience teaches that this ever-ready desire to attribute the blame to nerve elements is simply another way of stating that we do not know, and further researches have always shown that the over-zealous nerve theorists were wrong.

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* Read before the Detroit Academy of Medicine, Feb. 8, 1910.

Leaving, for the time being, the theories which attempt to explain the autogenous development of cancer, I will take up the various attempts that have been made to prove that this disease is of parasitic nature. Many of the foremost laborers in the field of cancer have adopted this belief which was prevalent in the premicroscopic age owing to the close resemblance of local cancer lesions to those of certain of the infectious granulomata. As early as 1886 bacteria were detected in cancer by Scheurlin. Since that time almost as many parasites have been reported as there have been investigators along that line. The yeast organisms of San Felice, the protozoa of Thoma and other observers, notably Plimmer, J. Jackson, E. von Leyden and Gaylord, and the Doyen micrococci, have all been thoroughly studied by many capable observers—and found wanting.

Space does not permit of taking up the reasons for and against the parasitic theory in detail, so I will simply summarize the chief arguments that have been advanced in its favor. First, certain cellular degenerations in sheep-pox and smallpox, known infectious diseases, bear a resemblance to similar changes noticed in cancer cells. Next is urged the so-called house infection of cancer, comparable to the cage infection in animal experiments. Again, cancer of the breast in elderly female mice is most generally seen in animals that have been used for breeding purposes. It has also been observed that the continued transplantation of mouse tumors increases the virulence of the tumor. More recently Bashford has shown that the virulence of the tumor depends chiefly on the age of the host. A transplantation will be successful in young mice, but not in old. This also explains to some extent the previously claimed immunity of some mice to cancer inoculation, which fact was urged as favoring the parasitic theory. The transformation from one variety of tumor to another in animal experiments has also been advanced in favor of this idea. However, the transformation noted is invariably from a carcinoma to a sarcoma, a fact that always leaves a suspicion as to whether the second tumor is really of malignant character.

Other facts have been urged in favor of the infectiousness of the process, notably the observations of Perthes that treatment of warts by the x-ray removes the stimulus to excessive epithelial proliferation, resulting in normal epithelium; but none of these observations is in reality conclusive. Certainly all the arguments so far mentioned could be explained equally as well, if not better, by means of the autogenous belief. A similarity between the rapidly proliferating and partially degenerated epithelial cells of cancer and those of known infectious lesions signifies no connection between the causative factors of the changes. It would be impossible to state whether the vacuole in a single vacuolated cell was caused by the application of heat, a bacterial invasion, or a simple lessening of fluid content due to too rapid division. As to contact tumors and direct infection, one could readily conceive such to be possible, even if the cell itself is the active parasite. However, surgeons have been removing cancers since the time of Hippocrates, and as yet no case of infection from such a source has ever been observed.

Observations of pathologic changes caused by parasitical invasions teach us that the first change is always one of local tissue destruction. As a result of this, other cells must multiply in order to compensate for the loss sustained. This process of repair calls into action not only the cells at the point of infection, but certain elements of the vascular system as well, chiefly the leucocytes and to a lesser degree the red blood corpuscles. The percentage of vascular cells brought into action depends both on the nature and virulence of the invading organism, and blood examinations have taught us that the total number of such cells may be greatly increased in many instances. Shall we lay the cause of this increase to a mere mechanical or nerve theory, or shall we adopt the more plausible theories that have been evolved since the epoch-making work of Ehrlich and state that it is due to a definite chemical activity? But to return to the original subject: The local changes following any infection or injury, whether chemical or physical, are always primarily destructive in nature.

Is such the case in the early stages of cancer? I believe that every one will agree that the first positive sign of epithelioma, which we will take as an example, is a loss of the distinct limiting border between the epithelial cells and the connective tissue beneath. In other words, when the pathologist tells us, "This may or may not be cancer, it is suspicious" the section that he has examined shows in no area cellular destruction of any degree. On the contrary, it shows simply an active increase in the number of cells in that locality, some of which are in the stages of reproduction and piled up thickly on each other, with a probable loss of definition of the limiting membrane. In other words, infiltration is beginning. In none of these early pictures is there the slightest evidence of vascular invasion or cellular destruction.

Again, I believe that it is absolutely inconceivable to the majority of pathologists that any outside infection is capable of causing an epithelial cell to reproduce itself within the liver, lung or brain, or even in a lymph gland. Lately several cases have been reported of malignant uterine leiomyomata. How could a parasite cause a muscle cell to invade a lymph gland and reproduce itself therein until the entire structure of the gland is replaced by muscle cells alone? The advocates of the parasitical theory would have us believe that this is just what happens. The invading infection causes the cell invaded to multiply, regardless of outside conditions. As stated above, however, such a procedure would be contrary to all pathologic observations, since the active process in parasitic infection is always one of primary cellular destruction.

In order to explain satisfactorily the causation of cancer, I believe that we must first solve the riddle of life. What is it that causes any cell to divide and multiply? In the instance of the simple amœba we know that this cell may reproduce itself simply by the chemical reaction which occurs between the cell and the surrounding media. Outside influences, either chemical or mechanical, may hasten or retard such division—but the capability of division is inherent to the cell itself. In the case cited, such a division must be the result of chemical changes within the cell—no other method of explanation would be satisfactory. With regard to the cells of the human body, we can also conceive that each cell has within itself the power of reproduction. This power is called into action continually because of the changes normally occurring within the human body. Thus the epithelial cells of the skin are continually being cast off and again replaced by those of the deeper layers beneath. The same thing is true of the cells that compose every tissue of the body. Some have highly specialized functions and their chemical content is found to differ widely, but in all the power of reproduction is present to a greater or less degree. A comparative study teaches that this *power of the cell is inherent in* the cell and is not dependent on any special nervous influence.

When we attempt to compare the relative frequency of various forms of neoplastic growth we come readily to the conclusion that practically all forms of malignant disease are dependent on cells that possess this reproductive power *in the greatest degree. This is true not only* of the tumor formations which arise from the extremely productive embryonic cells, but also of those which occur in late life and arise from apparently normal tissue. Thus, the cells which compose the rapidly growing sarcoma in the child of tender years and those which form the lip cancer in the man of sixty have this property in common—active reproduction. Outside influences may stimulate this property to a marked degree, especially if the irritation be so slight as to cause stimulation and not destruction of the cell, but the power of reproduction belongs to the cell itself.

If we consider that every cell has within itself the power of multiplication, we next ask, Why do not these cells keep dividing and multiplying continually? Why is it that reproduction and destruction continue in just such a proportion that the balance is always correct? This under normal conditions must be a property inherent to the tissues also, and it is hardly conceivable to my mind that such depends to any great extent on nerve influence alone. Each cell cannot be governed by a nerve ending which controls this special function of that cell. Such cannot be the case in the lowest forms of life where there is no nervous system to control. There it must be some property inherent to the cell itself. In the case of the highly differentiated liver cell, it is due to the chemical nature of the cell that it is able to make its specialized product, bile. The amount produced may be controlled, to some extent, by nerve stimuli, but the ability to produce is possessed by the cell itself and is not dependent on any outside influence. Constant exercise of the specialized function of the liver cell results in the death of the cell; consequently there must be periods of lessened function on the part of many cells, during which time like cellular elements are undergoing the process of reproduction in order to compensate for the loss of elements destroyed. This process of actual reproduction, as stated before, varies with the need, and is certainly dependent to some extent on outside influence. In the lower forms of life, however, it is a property inherent in the cell; hence it would not be totally wrong to assume that each cell possesses a definite chemical ferment which controls its power of division and reproduction. As this power of cellular elements is not active at all times, it might not be amiss to proceed a step farther and state that the reproductive substance is normally stored within the cell as a zymogen, which in turn is changed to an active ferment when more cells are demanded. This demand might depend on chemical or mechanical irritation from outside sources to a certain extent. In the case of cancer, clinical observation has shown that the probability is that mechanical irritation is the *a priori* factor in bringing around the activity of this ferment—especially a low grade of irritation which does *not* produce cellular death, but instead *keeps the specific reproductive ferment constantly in an active state.* In other words, we might imagine that when one cell forms two daughter cells, under normal conditions, the ferment is present in the new elements as a zymogen; but in the case of malignant disease there is no inactive stage. Instead of pre-enzyme there is always the active ferment so that this predominates, *and the total function of the cell is now one of rapid reproduction only.* Thus the cell has acquired as its principal constituent the ferment of active reproduction, its whole nature is changed both physically and chemically, and it is a true autogenous parasite.

While it must be admitted that the above statements are mostly theoretical, yet clinical observation and modern research have demonstrated that chemical ratios are different in cancer individuals. First we have the work of Crile, which has been corroborated, in part at least, by many others, that shows the blood of cancer patients to be capable of causing hemolysis of normal red blood cells. This surely must be the result of an added chemical ferment to the blood of individuals suffering from malignant disease.

The recent works of V. C. Vaughan concerning the chemistry of the bacterial cell tend to prove that in bacterial infections, especially of the lytic type, a ferment is formed which is capable of destroying the bacterial cell through the injection of the specific "residue" of that bacterial cell within the human body. With this in mind, I have attempted likewise to induce the formation of a ferment within the human body which is capable of destroying the cancer cell through injections of its non-toxic residue into the body from which the cancer was obtained. Examples of the formation of such a substance within the host through normal circumstances might explain the few cases of apparent self-cure of cancer which have been observed; some of which cannot be denied. Whether the malignant process arises from one single cell *per se* or from several cells in the same locality has been a matter of some discussion. In my opinion, *one single cell is in all probability the first to obtain this new property and all others are direct derivatives of this one cell.*

The plea for a trial of this method does not diminish to any degree the necessity for radical operation. It is undoubtedly true that early and radical operation saves the lives of many sufferers from cancer, and prolongs the lives of many others; but I firmly believe that, even with the most radical measures, the total percentage of absolute recoveries will never greatly exceed the 30 to 50 per cent. that some surgeons report now. The few cells that have penetrated beyond all reach of the surgeon's knife will continue to multiply and grow. I have seen secondary melanotic sarcoma of the liver, after total enucleation of the eye twenty years previous, as well as secondary axillary involvement by a breast cancer before the mammary cancer itself could be palpated. The last instance could well be considered as inoperable with glands the size of walnuts in the axilla and attached to the vessels. My attempt, therefore, has been to establish the ferment which destroys the cancer cell in subjects who can well be considered beyond surgical relief. The injection of non-toxic residue can do no harm, and no other known method is of any avail.

The preparation of the residue has been repeatedly described by V. C. Vaughan in his many articles concerning the chemistry of the bacterial cell. The Shattuck Lecture of 1906 describes the preparation in detail, and, as the method of preparing "cancer residue" is the same, I will state the essentials briefly: The cancer material is dissected as freely as possible from all surrounding tissues, after which it is ground in a meat grinder. The material is next washed with water, dilute salt solution, alcohol, and, lastly, ether. This process removes salts, fats, wax, several proteid bodies, and traces of carbohydrates. The remaining substance is then heated in a flask with a reflux condenser with from 15 to 20 times its weight of a 2 per cent. solution of sodium hydroxid in absolute alcohol, and by this means it is split into a toxic and a non-toxic group. The toxic portion is soluble in the alcohol, the non-toxic is insoluble, and it is with this portion we have to deal.

The first work with preparations of this nature was done in September, 1907, so that the period of trial is of too short duration to make a report of any value, except in the case of death of the patient or treatment of a patient for recurrence after operation. Consequently, in the following brief case reports I will use only cases belonging to these groups. Other patients, after radical operation, have been given injections of the residue, either autogenous or from a like growth, with the hope that its early use might cause the few carcinoma cells left in the body to be destroyed. However, a period of at least five years should elapse in every case of such nature before any conclusions can be drawn, and I will omit those cases from this report.

Case 1.—Mrs. S. (patient of Dr. Boise of Grand Rapids) was first operated on in March, 1897. At this time both breasts were amputated, one of which proved to be cancerous. In January, 1901, the glands of the axilla were removed. Other operations were performed in December, 1901, and December, 1902, the exact nature of which I have been unable to ascertain. After the last operation the *x*-ray was used for one year, since which time its use has been intermittent. In January, 1908, Dr. V. C. Vaughan of Ann Arbor, was called in consultation. The patient at that time showed active recurrence. Several large glands were palpable in the axilla. The arm was swollen and edematous and there was local recurrence in the wound. Cancer residue from an adenocarcinoma of the breast, already prepared, was sent to Dr. Boise with instructions that injections should be given every ten days. The dosage was 1 c.c. of a 0.5 per cent. solution. Injections were given for 8 months. A letter from Dr. Boise, dated Sept. 2, 1908, states that the patient is much better and no nodules can be felt. Another letter, dated Dec. 18, 1908, states: "Mrs. S. is feeling well, looking well and doing well. The small nodules in the skin have disappeared. The arm is no more swollen, but the ulcer in the center of the scar remains about the same; it certainly is no larger and I think that it is a little smaller. This is probably an *x*-ray burn aggravated by the tension on the scar. Mrs. S. has not used the *x*-ray since July 1." In answer to a request for information concerning the patient that Dr. V. C. Vaughan made of Dr. Boise recently, he wrote, Feb. 7, 1910: "At present Mrs. S. is much as you saw her—intense capillary injection due to *x*-rays—cicatricial tension impairing usefulness of arm—two ulcers (due to *x*-ray?), not (apparently) malignant—a valvular lesion of the heart—great difficulty of breathing on exertion, but no edema or other signs of cardiac failure, and no signs of active malignancy."

Case 2.—Mr. M. (patient of Dr. Ballin) was operated on Feb. 20, 1909. Exploration revealed a large mass the size of a child's head which involved the liver, gall-bladder and hepatic flexure of the colon. The lymph glands were everywhere enlarged and pearly white. No microscopic examination was made. The clinical diagnosis was carcinoma and the abdomen was closed. The patient received weekly injections of cancer residue prepared from a previous breast cancer. The dosage was 1 c.c. of a 0.5 per cent. solution. The mass became slightly smaller, but no other changes were observed. The patient died on April 30, 1909, from starvation. The most noticeable fact during the course of his illness was that he complained of no pain after the beginning of the injection treatment.

Case 3.—I operated on Mr. H. P. (referred by Dr. Gleason) for cancer of the lower lip, June 23, 1909. The tumor was excised and both submaxillary fossæ were stripped of their lymphatic and submaxillary glands. Microscopic examination showed epithelioma of the lip. Epithelial cells were also found in both the lymphatics and submaxillary glands. This patient failed to return to the office until forced to do so through a glandular recurrence in September. He then entered Harper Hospital, where a neck dissection was again attempted. The cancerous tissue was found to have infiltrated into the muscular structures, encroaching on the larynx and tongue, and also involving the mandibular periosteum. The primary tumor was then split up, together with the submaxillary glands. The amount obtained was so small that it was deemed best to prepare a 0.25 per cent. solution. This was injected near the tumor site in doses of 1 c.c. Injections were at first made every week, later twice a week, and toward the last every other day. The patient died November 28, 1909, from starvation, owing to the fact that he was unable to take nourishment of any kind by mouth during the last month of his illness. Postmortem examination of the neck showed that the entire right side of the tongue and surrounding tissues were composed of infiltrated cancer cells. A fairly large abscess was found between the base of the tongue and the epiglottis. This had drained imperfectly and was, I believe, the chief cause of his inability to swallow. It is of interest to note that when recurrence occurred his pain was severe. *X*-ray treatment was given with the hope of relieving this symptom, but was ineffectual. After the first injection of residue, from his own tumor, pain subsided and was always controlled by this means thereafter.

Case 4.—Mrs. B. (patient of Dr. Ballin) was operated on Oct. 7, 1909, because of cancer of the right breast. The operation was radical; several large glands were removed from the axillary veins and nerves. A residue was prepared from the patient's own tumor. The attending surgeon had advised *x*-ray treatment and these were given until January, 1910. At this time recurrent supraclavicular glands were easily palpable and the patient complained of severe pain. The autogenous residue was then tried, and after the first injection the pain ceased, since then the injections have been repeated twice a week with apparently favorable results.

Case 5.—Mrs. K. (patient of Dr. Ballin) was operated on Feb. 10, 1909, for adenoma of both breasts. The operations consisted of simple removal of the tumors. Appendectomy was performed at the same time. Microscopic examination showed a suspicious piling up of the cells in the tumor from the right breast and the subsequent occurrence of enlarged lymphatics in the same axilla confirmed the diagnosis clinically. Radical removal was performed Oct. 30, 1909, and sections of the glands showed adenocarcinoma. Since Dec. 30, 1909, this patient has received weekly injections of the residue prepared from the tumor in Case 4. The wound is entirely healed, the patient has gained in weight and feels perfectly well.

Case 6.—Mrs. B. (patient of Dr. Ballin) was operated on for cancer of the left breast, Dec. 18, 1909. The glandular involvement was very extensive, involving the axillary and supraclavicular glands. During her residence in the hospital she received 2 injections of 25 minims each of the cancer residue from Case 4. The wound healed well and she is apparently in good health.

Case 7.—Mr. C. (patient of Dr. Ballin) was operated on at Harper Hospital, Feb. 28, 1908, for cancer of the palate. The operation was radical, nevertheless recurrence was observed within six months. *X*-ray treatment was given without apparent effect. In November, 1909, 4 injections were given of residue from Case No. 3, without apparent effect. *X*-ray treatments were continued until December, 1909, at which time injections of residue from Case No. 8 were begun. These were given at first weekly, and then bi-weekly. Pain apparently is absolutely controlled by the frequency of the injections. The anterior portion of the tumor mass has healed over completely, leaving a healthy looking scar, and that portion of the cancer visible has almost entirely disappeared.

Case 8.—Miss B. (patient of Dr. Ballin) was operated on for epithelioma of the left elbow, March 11, 1908. The malignant growth was completely excised and a large skin flap taken from the abdomen to cover the defect. At the end of ten months recurrence was noticed under the elbow-flap. Aug. 2, 1909, the flap was dissected upward and the tumor curetted: Oct. 29, 1909, it again was found necessary to clean out the cancer cells. From the material obtained at this time residue was prepared. The amount was so small that the solution was made 0.25 per cent. *X*-ray treatment was employed regularly but by December 20 the recurrence had become so painful that curetting was again resorted to. Immediately after this, injections of the split product were begun. Even with the few days intervening between operation and the begining of injections, two rather advanced foci of recurrence could be detected. Injections were made at first weekly, and then every other day. A single suspicious area occurred, followed by total disappearance within two days after injection into the area. This is the only form of treatment being used now, and since its beginning the patient has been entirely free from pain. An interesting specimen was obtained from this case just after commencing the injections. A suspicious area was clipped from the arm twenty-four hours after an injection had been given. The microscopic section showed a superficial layer of normal epithelial cells under which was observed normal connective tissue and fat cells, while under the latter area was a mass of deeply staining necrotic cells, which had lost all form and contour. This represented that portion of the epithelial infiltration which could be reached by the patient's blood supply and in it no definite cell could be found.

In conclusion, I would say that the results so far have been encouraging. The above patients all had definite signs of recurrence at the time of commencing the injections.

Immediately after the first injection of cancer residue the symptom of pain ceases.

While the growth of new tissue in all patients treated has not been entirely stopped, yet it may safely be stated that its rapidity has been lessened.

I have purposely chosen cases of superficial forms of cancer in which recurrence could be seen, so that results could be more accurately and quickly estimated.

Every tumor should be examined microscopically and he patient preferably treated with the residue from his own tumor cells. This method of procedure should be combined with radical surgical removal and instituted as soon thereafter as possible.

A few cases, whether favorable or not, signify but little, but if the majority of surgeons who control large cancer material would give this method a trial definite conclusions could soon be reached.

603 Washington Arcade.

GASTRIC ANALYSIS IN INFANTS*

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BUFFALO

Two years ago I commenced a study of the gastric analyses of infants to determine, if possible, secretory abnormalties which might be associated with the vomiting of infants, especially of those rejecting a sour-smelling material.

At that time there was nothing which I could find in the literature at my disposal that gave accurately the gastric analysis of the normal or abnormal infant. It was consequently first necessary to examine material from a so-called normal series, and then to collect sufficient cases of the abnormal or sour-vomiting series to make a report of any value.

Since then Dr. T. Wood Clarke at the Rockefeller Institute in New York, at the suggestion of Dr. L. Emmett Holt, has done some work in this line and worked out elaborately (as is possible in that institution) a series of gastric analyses of infants. His tests were more elaborate than would be possible for the average physician, requiring a well-equipped laboratory. Our tests are those which could easily be made in the laboratory of any physician, and considering their scope are equally accurate.

Dr. H. R. Lohnes, who is associated with me, has made for me one hundred and twenty analyses from sixty-two cases, of which number fourteen cases belong to the sour-vomiting class.

I am pleased that our figures correspond so closely with Dr. Clarke's, although his are expressed in a different way, for both present data which may help form the basis for an average gastric analysis of infants.

We hoped that we might be able to surmise, if nothing more, the secretion abnormalities of butyric acid fermentation, but in this we were disappointed. We have learned, we think, how important a factor hyperacidity is as a causal factor in vomiting.

In our sixty-two cases, in many of which two or more analyses were made, were the fourteen cases of sour-vomiting. Deducting these we present statistics from forty-eight cases, all institution babies, in a condition as nearly normal as institution babies usually are, varying in age up to twelve months. From these we deduce our averages of the gastric analyses and compare them with the averages of the gastric analyses of the fourteen sour-vomiting babies.

TECHNIC

Our technic was to examine the gastric contents one-half hour after a meal of plain barley-water, and also one-half hour after a proprietary food containing starch, made up without milk.

In making these analyses the Topfer method was used, which, though not absolutely accurate, is sufficiently so for clinical purposes.

Free hydrochloric acid was estimated by using phloroglucin vanillin, and quantitatively by titration with decinormal sodium hydrate solution, using dimethylamido-azobenzol as an indicator.

Total acidity was estimated by using phenolphthalein as an indicator, and combined acidity by alizarin.

BARLEY WATER IN NORMAL INFANTS

In forty-two of these analyses after barley water we found an average, expressed in degrees, of free hydrochloric acid, 3.61, total hydrochloric, 7.30, total acidity, 11.00. But this average was open to question because five infants nine months of age or over presented a very high degree, the average being free hydrochloric, 14.6, total hydrochloric, 25, total acidity, 26.4.

If these are deducted and only thirty-seven analyses which correspond more or less closely, used to make up the average, we obtain a fairer average, which is, free hydrochloric acid, 2.1, total hydrochloric acid, 5.6, total acidity, 9.

This we accept as the average for our normal series after barley water.

Of this series twenty-one analyses were very similar, eight were, as Clarke designates them, hyperacid, and eight hypoacid, which means somewhat above and below the average.

Of this same normal series two of the hyperacid subjects vomited and one of the hypoacid.

PROPRIETARY FOOD IN NORMAL INFANTS

Turning to the starchy proprietary food made without milk, which contains more proteids than barley-water, some fat, with sugar and carbohydrates, we find

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* Read before the Academy of Medicine of Buffalo, Feb. 8, 1910.

VINCENT'S ANGINA DURING QUARANTINE FOR DIPHTHERIA

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PHILADELPHIA

Although ulcero-membranous stomatitis, or pharyngitis, also known by the name of fetid ulcerous inflammation of the throat, has been recognized for many years, and although there is still controversy as to whether Vincent was the first to discover the fusiform bacilli and the long spirilla, which, occurring together, are characteristic of this affection, it is certainly due to his observations and writings in the years 1896-1898, that this rather uncommon form of pharyngitis has been brought to general attention, and the obscurity of its etiology and differentiation cleared up; so that at the present time this condition is less frequently confused with true diphtheria than was formerly the case.

Recently I had opportunity to observe a number of cases of the peculiar necrotic ulceration, known as Vincent's angina, in an institution which is constantly receiving children from the worst possible hygienic surroundings. At the time of the outbreak of the small epidemic referred to, no children had been admitted for a period of over a week, as the institution was under quarantine for diphtheria, which had been introduced by a child with chronic nasal discharge, with the result that three patients had been removed to the Municipal Hospital. All of the remaining fifty children were then immunized, and this fact aided in the recognition of the new disease.

The first patient gave a misleading history, and showed no membrane at the time of discovery, and the disease was not recognized as Vincent's angina until the next case with a typical pseudomembrane occurred, two days later, when the peculiarities of the former case, were explained. Smears were then made from Case 1, as well as the latter, but the organisms were not found in the former, probably on account of the vigorous treatment instituted.

A brief history of the nine cases observed is as follows:

On the fifth day following the removal of the last patient with dipththeria to the hospital the matron reported that in the course of the daily examination of the remaining children, J. B., aged 11, had an ulcer in the side of his cheek, which he said had come from biting it while eating. Examination revealed a small irregular-shaped and fairly deep ulcerated spot in the middle of the right cheek, just at the line where the teeth come together. There was no membrane, the base was clean, but there was considerable induration, and a zone of turbid, red swelling surrounded the ulcerated area, which was the size of a small bean.

Externally the cheek appeared somewhat swollen, and the induration could be readily felt. From the general appearance it seemed that the boy's explanation was correct, but there was noticed a very peculiar, sour, fetid odor to the breath, unlike the putrid odor of noma, but somewhat suggesting it. It was also noticed that the gums were rather spongy, and that manipulations in the mouth caused bleeding at the base of the teeth in numerous places. The temperature was normal, there was no sore throat, and the discovery was made by the attendant, as the boy evinced no discomfort and said it only hurt when he chewed.

He was promptly placed in isolation, with the idea of possible noma, and after a thorough cleansing with liquor antisepticus and hydrogen peroxid, the cheek, ulcer, and margins of the gums were swabbed with 50 per cent. argyrol solution every three hours. No extension occurred and apart from the slow healing of the ulcer there was nothing further of interest except the persistence of the musty odor and of the spongy gums for over a week

Four days later the matron reported that at the routine morning inspection two children were found to have sore throats with exudation, but with normal temperatures, and with no complaint of pain, chilliness, or, in fact, of any discomfort whatsoever. Examination revealed in each case a quite extensive involvement of both tonsils, with a whitish cheesy deposit; not the firm yellowish, grayish, or greenish-white, that is generally seen in faucial diphtheria, but a sort of crumbling, soft material of about the consistency of butter and having somewhat the appearance of cottage cheese. There was the same fetid odor present that had been noted in the first case, and also the same sponginess and tendency to bleeding of the gums on slight manipulations of the mouth.

The children, however, were bright and seemed entirely comfortable, and as the matron had reported, it was again found that their temperatures were normal. The diagnosis of Vincent's angina was made tentatively, and the Board of Health notified by telephone, with the request that an immediate visit by one of their inspectors be made, in view of the fact that the institution was still under quarantine for the recent outbreak of diphtheria.

Smears were taken from the exudate in both cases, and also from the gums at the bases of the teeth, and the examination of the slides was made at the Ayer Clinical Laboratory of the Pennsylvania Hospital, where the typical fusiform bacilli and long spirochetes were found almost to the exclusion of all other organisms.

The inspector had scarcely more than entered the isolation room when he remarked, "You can almost make a diagnosis of Vincent's from the smell here," and after the examination of the children he concurred in the diagnosis, stating further that he had recently been summoned to several cases of supposed diphtheria, which had proved to be Vincent's angina.

The disposition of the cases became the next problem, as at that time there was no provision for such at the Municipal Hospital for contagious diseases, where they could only be placed in the diphtheria ward to the great detriment of all concerned. The Board of Health solved the problem by having the patients admitted to the isolation wards of the Philadelphia General Hospital, which are kept for emergencies, but at the present time there is ample provision for such contingencies in the detention buildings of the new Municipal Hospital for contagious diseases.

The next day another case developed, and two days later a fifth, but as all the children affected were promptly removed and still cases occurred, smears were taken from the mouths of all the remaining children who showed any sponginess of the gums, enlarged tonsils, or any other suspicious portal for infection. Of these children there were six, and in four the results were positive, though there was no macroscopic evidence of any of the characteristic features of the disease.

In two the organisms were found in smears, taken from the tonsils, and in the other two, from the spongy margins at the base of the teeth. None of these children had any symptom of illness, and no fever was present in any of the nine patients seen. Their ages ranged from 3 to 15 years. After the removal of these last children, no further cases occurred.

In searching for the cause of the transmission of the disease after removal of the discovered cases, it appears probable that the infection was conveyed by a tumbler which was kept alongside of a water cooler, to which the children would go as they felt thirsty and help themselves.

Further comment on this fact appears superflous, unless it would be pertinent to remark that it is quite easy to formulate rules but an altogether different matter to have them properly enforced, as everyone connected with institutions will agree.

Primary Vincent's angina is as a rule a mild disease, but occasionally it assumes a virulent type and rarely may even be fatal.

Secondary Vincent's following or complicating other diseases such as scarlatina, diptheria, and especially measles, is, on the contrary, a very dangerous affection, and usually pursues a malignant course terminating fatally. Through the courtesy of Dr. S. S. Woody, chief resident physician of the Philadelphia Hospital for Contagious Diseases, where secondary Vincent's angina is seen in its worst form, the following interesting features of this type are briefly summarized:

> The disease in secondary cases is characterized by but little if any elevation of temperature, but with a rapid, feeble pulse; with profound prostration, with excited nervous system, irritability, wakefulness, tremors, and frequently, in the later stages, with the appearance of the Hippocratic facies, and death in a brief period from toxemia or exhaustion. The odor is characteristic, with salivation and moderate cervical entumefaction, and the spongy, friable, and readily bleeding gums are almost invariably present, in some cases even closely simulating the picture of scurvy. In severe cases, the necrosis proceeds with extraordinary rapidity and the tissues apparently melt away, destroying large areas in an incredibly short time.

The features of interest in this small epidemic were, *its extreme mildness, the recent presence* of diptheria in the institution, the probable spread of the infection by a mediate object and the fact that characteristic organisms were found in the mouths of some children, whose gums were spongy or bled easily, without the production of either exudation or ulceration.

1701 De Lancey Place.

MUSCULAR SPASMS DUE TO HEAT IN COOKS ON PULLMAN DINERS

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Dispensary Attendant in Internal Medicine, Medical Department of the University of Kansas
KANSAS CITY, MO.

In none of the articles[1] calling general attention to
ular spasms in individuals whose occupations ex-
them to intense heat has any mention been made
is condition in professional cooks and chefs. I have
tly had my *attention called to the fact that it does.*
r in this class of occupations by a patient whom I
ined in the Dispensary of the University of Kan-

story.—The patient was a negro, 64 years of age, who com-
ed of some vague pains in the loins and back. He had
ed also that his urine was red and deposited a heavy sedi-
. *He stated that he had been a professional cook for*
e years, that he had recently been head cook at the Gen-
Hospital in Kansas City and had previously worked for
years on Pullman diners in the southwest part of the
ed States. When questioned as to his past history he
d that he had never been ill in his life, except on some
sions when he got "over-het." Urged to amplify this some-
, he told me that very often while in an overheated kitchen
ad been seized with cramps in the muscles, especially the
les of the calf and of the abdomen! These were described
ard, tonic contractions and intensely painful; when they
rred he was compelled to go out into a cooler atmosphere
lie down for an hour or two, after which he could resume
. He had found two or three glasses of lemonade the best
nct to treatment. The condition was familiar to him and
ll cooks, at least on Pullman diners, where in the hot
her the temperature in the kitchen sometimes rose to 150
le knew very well one man who had been seized with gen-
ized tonic spasms on duty, and who had died in the hospital
he end of his run. The spasms tended to become worse and
e frequent with time.

amination.—Little was found on examination of this pa-
t. His temperature was 98.3, his pulse 84. He had a
se tremor in both hands which was increased on voluntary
ement. His reflexes were normal, there was no Babinski, no fibrillary twitchings in any muscles, nor were there any tonic spasms. His pupils reacted to light and distance. His urine was red, clear and acid, with a specific gravity of 1025, contained no albumin nor sugar, but on standing deposited a heavy sediment of urates.

On inquiry I have found that *while this condition* is well known among Pullman chefs it is not familiar to those who work in the better ventilated kitchens of hotels, restaurants and cafés.

404 Bryant Building.

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[1] Edsall, D. L.: THE JOURNAL, li, 1969; Welsh, H. M.: THE
RNAL, lii, 1178: Cameron, W. H.: THE JOURNAL, lii, 1483.

EXTRAUTERINE PREGNANCY AT FULL TERM

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The following two cases of extrauterine pregnancy at full term are reported because of the comparative infrequency of this condition and *because of the erratic course* of each case during the operation for its relief.

CASE 1.—Mrs. A. S., aged 28, married three years, primipara. Previous history negative.

History.—She had had a stormy pregnancy with pains and hemorrhage at various intervals and with no suspicion of the pregnancy being extrauterine. Labor pains developed at the end of the *ninth month, and her physician, after spending* a whole night at her bedside, finally suspected her true condition and had her removed to a hospital where I was called on to operate.

Operation.—The abdomen was opened in the middle line. The uterus was found high up in the abdominal cavity and to the extreme left; it was about twice its normal size. The left uterine appendages were normal; the right appendages could not be distinguished as they were connected with, and formed a part of a large cystic tumor situated behind the uterus and filling the entire abdominal cavity. The tumor was laid open and a living child weighing seven pounds was removed. The placenta came away intact with the child. No hemorrhage of any consequence followed the removal of the placenta nor was it marked at any time during the operation. As several loops *of bowel were adherent to the sac of the tumor no attempt* was made to separate them and only the free part of the sac was removed. The two uterine and ovarian arteries were ligated to ward off any possibility of secondary hemorrhage and the abdomen was closed without drainage. The woman made an uneventful recovery, the wound healing by primary union.

CASE 2.—Mrs. M. R., aged 33, had three children, the youngest two years old. Previous medical and menstrual history was negative. She became pregnant a year ago. Six weeks later, she had severe pain over the right ovarian region and attacks of fainting and vomiting which kept her in bed for fourteen days. These pains and fainting spells continued for three months, after which she felt better. She felt the fetal movements after the fifth month. Her health continued good until the ninth month of her pregnancy when she had severe labor pains, fainting spells and vomiting attacks. Her attending physician pronounced the pains spurious; and she got up; but continued to suffer from periodic attacks of pain. At the eleventh month she entered a local maternity hospital where a physician attempted to "open her womb," as she expressed it, but as no child was forthcoming she was sent home to return at a later date. She then came under my observation twelve months after she became pregnant.

Operation.—The abdomen was opened in the middle line. The uterus was found occupying a similar position as in Case 1, but it was not much above normal size. The appendages on the left side were normal. The right ovary was about four times its normal size, flattened, and adherent to the front of the cystic tumor that filled up the abdominal cavity. The right round ligament coursed in the front of the tumor. The right tube and right broad ligament could not be distinguished and they seemed to form a part of and to be connected with the tumor mass. The tumor was opened and a dead child beginning to macerate and weighing nearly ten pounds was removed. At an attempt to remove the placenta a profuse hemorrhage ensued which for a time threatened the life of the patient and was brought under control only after compression of the abdominal aorta and ligation of the uterine and ovarian arteries of both sides. A considerable amount of oozing continued even after that and further attempt at removing the placenta had to be abandoned. The placenta was stitched to the wound in the abdominal wall and a drain inserted. The patient made a good recovery; she was out of bed at the end of the third week and the placenta had entirely drained away by the end of the fifth week.

The difference found in these two cases during operation, refutes the commonly accepted dictum that the greater liability to hemorrhage under such condition exists with the presence of a living child in the abdomen, and that the degree of danger is lessened in proportion to the length of time that has elapsed after the child's death.

While it must be conceded as true that the placenta is more vascular during the life of the child and consequently is more apt to bleed profusely if its vessels are roughly handled and torn, the same cannot hold true if the placenta can be gently separated from its bed. A great deal more depends on the site of the attachment and the structures to which the placenta is adherent. If it is attached to any large vessel like the inferior mesenteric uterine or ovarian arteries or veins, forcible detachment may cause a tearing of the particular vessel and consequent profuse hemorrhage. This would be even more dangerous in a placenta after the death of the child. In fact the danger would be in exact ratio to the length of time elapsed since the death of the child; for the longer the dead child remains in the abdomen the greater and stronger the adhesions between the placenta and the adjacent structures and the greater force necessary to separate them.

Caswell Building.

MENSTRUAL DISTURBANCE FOLLOWING ADMINISTRATION OF DIPHTHERIA ANTITOXIN

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DENVER

On entering my service as interne at the Steele Memorial Hospital for Contagious Diseases I was surprised to learn that the nurses refused to take the periodical immunizing dose of antitoxin. On inquiry I learned that over half of them, on the administration of even 500 units of antitoxin, were troubled with a profuse clotted menstrual flow which amounted in many cases to a hemorrhage.

Since I am unable to find any similar cases in medical literature or any reasonable explanation—three different brands of concentrated antitoxin being used—I am sending this report hoping to bring out the experience and ideas of other physicians.

Case 1.—Nurse, widow, aged 29, had no previous history of menstrual disturbance; flow always free. July 1, she was given 3,000 units antitoxin for the purpose of immunization as she was just entering the hospital. July 5, the menstrual flow began, two days ahead of time. The flow was very profuse and constant, a number of clots about 4 cm. in diameter being passed. The severe flow ceased under bed rest. The entire flow lasted six instead of the usual eight days and was unusually profuse throughout.

Case 2.—Nurse, widow, aged 36, had no previous history of menstrual disturbance. September, 1908, during a rather severe attack of diphtheria she was given 37,000 units of antitoxin. The following menstrual period began three days ahead of time and was very profuse and clotted. For the following eight months the menstrual periods appeared every two or three weeks and were very profuse. In June, 1909, she was given 5,000 units of antitoxin on account of a suspicious throat, before a negative culture report was received. She had ceased menstruating three days previous, six days later the flow appeared, lasting twelve days, being very profuse throughout.

Case 3.—Nurse, single, aged 27, had no previous history of menstrual disturbance; flow always free. She was given 5,000 units of antitoxin on account of a suspicious throat, before a negative culture report was received. The flow appeared the next day, the regular time, and lasted with varying severity for the next twenty-seven days. The following periods were normal. Six months later, she reentered the hospital and was given 500 units for immunization. The previous history was repeated.

Case 4.—Nurse; single, aged 26, during an attack of diphtheria was given 15,000 units of antitoxin. The following three periods appeared about four days early; the flow was profuse and the blood clotted.

Cases 5, 6 and 7 were similar to the above cases, one, however, being in a patient. Patients 1 and 2 were the only ones to have any form of serum reaction.

A CASE OF PSEUDOPARALYSIS IN INFANTILE SCURVY

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Infantile scurvy is a disease which is mainly the result of improper food, i. e., lack of fresh food and the use of boiled milk and prepared or patent infant foods. The symptoms are as a rule fairly definite, and usually lend themselves to an easy diagnosis. The important symptoms are slow and progressive cachexia, anemia, gastrointestinal disturbances of a subacute and chronic type, profuse sweating about the head and occasionally slight feverish attacks. The appetite is lessened. One of the earliest symptoms is sensitiveness of the bones. As the disease progresses the expression of the face is one of fear. Later, swellings of the legs appear; these are usually of the diaphysis, just above the epiphysis, and are pyriform and symmetrical in shape; the skin over the swelling is more or less tense, but there is no fluctuation. There is usually some tenderness on pressure, but as a rule no especial heat of the affected part. Signs of hemorrhage may appear in the skin. The gums about the teeth are of a livid color and bleed readily.

Frequently, as a result of subperiosteal hemorrhage and severe pains in and about the joint (epiphyseal pain), the child is apt to keep the affected joint quiet, and to resist any attempt at motion. In fact, as the bones of the limbs may become so sensitive that any pressure on them causes intense pain, a state of pseudoparalysis results. It is this which often first attracts the parents' attention and for which they bring the child to be treated. Occasionally there is a history of an injury which precedes the condition and which may tend further to complicate the diagnosis.

It is this class of infantile scurvy which is of interest to the orthopedic surgeon, on account of the joint condition and the fact that it may be ascribed to some other cause. The case presented below is one of this class, and the interest is increased on account of the history of a couple of injuries directly preceding the onset of the attack, which at first glance appeared to have a direct influence on the condition. The history of tuberculosis in the mother and in her family might also add a possibility of error.

History.—R. C., male, aged 11 months, an only child, was referred to me in August on account of a paralysis in both legs. There was tuberculosis on the mother's side. The mother was thin and delicate; had signs of tuberculosis before the baby was born; had been well since. The baby nursed for three days after birth and was then put on one proprietary food after another until one was found which agreed with it. This has been its exclusive diet except for an occasional cracker.

Present Illness.—On May 1 the child hurt its hip while being put into a chair; "the hip was doubled up" (flexed). The child complained for a while of much pain, which gradually got better. Six weeks later the baby fell from a table and hit the right side of its head on a chair; there was a small black and blue spot on the temple. The child apparently improved but was nervous, especially when handled. After this the condition gradually grew worse. The child was pale and had lost weight; occasionally had slight fever, was constantly passing flatus and at the time of examination was very nervous. It was disturbed by the slightest noise or motion.

Examination.—The baby presented a sallow, cachectic appearance; was fairly well nourished but seemed apprehensive; had four teeth, cut six at eight months. The gums were of a livid color, spongy, and the mouth painful. The neck and back were normal. There was a suggestion of a rosary; the chest was otherwise normal. There was symmetrical enlargement of both radial epiphyses. The abdomen was tense and flat. There were ecchymotic areas on arms and legs. The hips were held at an angle of 45 degrees flexion and were not moved voluntarily. The hips could be completely extended; abduction was not limited. The motions and pressure along the femora caused pain. The lower tibial epiphyses were enlarged. The child was very sensitive to touch. The urine was very slightly acid, albumin slightest possible trace.

Treatment and Course of Disease.—A diagnosis of scurvy was made and the patient was put on a diet of lactone buttermilk, beef-juice, potato and orange-juice. The buttermilk was later changed to raw whole milk. This diet was well borne and the patient showed a steady improvement. Eleven days after the first visit it was noted that the child's condition was greatly improved, its gums practically normal, it moved feet and legs, and had very little pain. The patient was thereafter to be under the care of the family physician. The child was seen six months later. It is fat and rosy; has a good appetite; eats everything; weighs over 25 pounds. It has not been sick since; walks everywhere and is very active; does not complain of any pain. It has twelve normal teeth; the gums are in a healthy condition. The legs are normal.

Metropolitan Building.

BLOTTING-PAPER MOLD FOR OBTAINING CRAYONS OF CARBONIC-ACID ICE *

SINCLAIR TOUSEY, A.M., M.D.
NEW YORK

Pure carbonic-acid gas which has been compressed into a liquid by enormous pressure evaporates so rapidly when liberated that a portion of the liquid freezes and takes the form of snow or ice according to the conditions under which it is collected. Frozen carbonic acid has a temperature of about 85 F. below zero and freezes any animal surface to which it is applied, a certain amount of pressure being required. The effect is one of superficial or deep destruction according to the length of application, thirty seconds usually being a full exposure. Frozen carbonic acid has been successfully used in treating port-wine stains, a type of nevus for which no other treatment is even partially satisfactory. Other lesions for which it is excellent are lupus, warts, condylomata, moles and epitheliomata.

METHODS PREVIOUSLY IN USE

The originality and simplicity of the method which I am about to describe is best shown by first describing two of the best previous methods.

In Gottheil's method[1] a folded towel or a piece of chamois skin is applied to the vent in such a way as to be in sufficiently close contact with the orifice. He sometimes uses a cylindrical staff or short piece of broomstick to get a proper cavity in the towel, removing it after the first windings of the retaining bandage have been put on. With ordinary rollers this hollow towel or bandage is firmly bandaged to the vent and heavily reinforced. It is well to use plenty of bandage and to wind it tightly around the neck of the vent and top of the cylinder, for on this depends the amount of pressure that can be used without rupture or escape of gas and the hardening of the ice. With the key the gas is then turned on at the tap, slowly at first so as to permit the ice to freeze in the meshes of the container. Clouds of white vapor or fine snow escape; the cloth may rupture and the cylinder top is covered with hoar frost. The gas is then turned on again forcibly a number of times until a sufficiently large and firm mass of ice is obtained. When this is obtained the cloth is icy cold and perfectly hard; the gas is then shut off and the bandage cut away. The ice cylinder and the cloths are frozen together and the bandages are brittle and must be carefully distangled to avoid tearing.

Pusey's method[2] is to collect the snow in a cloth or preferably a chamois skin and subsequently to compress it into a solid mass with the hands protected by a cloth, and to pare into any desired shape with a knife or press it into a tubular mold.

THE AUTHOR'S BLOTTING-PAPER MOLD

My device consists in a hollow cylinder made by rolling several layers of blotting-paper around a lead-pencil or a glass vial, which is then removed. The blotting-paper must be absorbent all the way through, not sized on one side like so many advertising blotters. One end of the tube thus formed is tightly stoppered. The other end is placed tightly against the nozzle of the liquid carbonic-acid tank and wrapped around with adhesive plaster to make an air-tight joint.

The carbonic acid cylinder employed is a small one, 18 inches long and 4 inches in diameter, and containing 5 pounds of the liquefied gas. It is laid on its side with the lateral nozzle turned downward. The liquid should be allowed to flow out into the porous paper tube. A portion immediately vaporizes and escapes through the meshes of the paper, producing cold enough to freeze the remainder. The liquid is allowed to flow very slowly, taking perhaps a minute to fill the tube. Turning it on full force would blow the tube off and waste a great deal of the liquid. When the mold is full of ice the liquid will begin to spurt out around the adhesive plaster and the flow should then be turned off. The adhesive plaster being unwrapped, the porous paper cylinder will be found to contain a crayon of carbonic acid resembling very much the crayons used for writing on a blackboard. The blotting-paper may be unwrapped from one end of the crayon so as to expose the latter. Or after waiting a short time the crayon will be found to have lost some of its substance by direct evaporation and to lie loose in the blotting-paper tube. The crayon may be made to protrude as much as desired by holding the tube upside down with something underneath to prevent the crayon falling out altogether. The blotting-paper is flexible enough and a sufficient non-conductor of heat to serve as a handle for the crayon, which must not be touched by the naked hand.

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* Demonstrated at the Meeting of the Dermatological Section, New York Academy of Medicine, April 5, 1910, and at the meeting of the Medical Association of the Greater City of New York, New York Academy of Medicine, March 21, 1910.

1. Intern. Jour. Surg., January, 1909.
2. THE JOURNAL A. M. A., Aug. 7, 1909, p. 459.

It is not practicable to secure ice crayons with the carbonic-acid cylinder in an upright position, because then only the gas above the surface of the liquid could reach the nozzle and escape. None of the actual liquid would be let out of the tank in this way.

59 West Forty-sixth Street.

CHILD BORN THROUGH PERINEUM

J. A. RAWLS, M.D.
KENT, WASH.

The case reported by Dr. Petrie in THE JOURNAL March 5 reminds me of a similar one I had Sept. 12, 1882, never before reported.

The patient, a forty-year-old primipara, had been in labor two hours when I arrived. She was a small, spare built, anemic individual, one of the kind Dr. Bartholow described in his lectures in 1875 as "the gelatinous product of albuminous parents." The tissues lacked tonicity. On making an examination I found the perineum bulging, and attempted to support and guide the head under the pubic arch. I felt the perineum give way, and the head was born, the body immediately following. An examination revealed the fact that the child was literally born through the perineum. There was complete laceration of the sphincter ani and the right labium majus torn loose for the lower two-thirds. I was assisted in the repair and after attendance by my partner, Dr. H. E. W. Barnes, now of Santa Ana, Cal. The patient made a complete, though somewhat tedious recovery. The age of the patient, the rapidity of the labor, and the manner of birth were the unusual features of the case.

Therapeutics

ANGIONEUROSIS

The best therapeutic measures are those that are harmless, and this is especially true when a proper diagnosis precludes the necessity for operative procedure, and even prevents the necessity for a wrong and perhaps harmful régime and for the harmful use of drugs. No more difficult task occurs in medicine than to make a decision as to whether a condition is hysterical or organic, or that it is a vasoneurosis of the skin or perhaps an infection. Nothing will put one so much on his guard against making a wrong diagnosis as will a brief review of what can occur from simple vasomotor ataxia.

It is nearly twenty-five years since M. Allen Starr, of New York, contributed to the fifth volume of Pepper's System of Medicine an elaborate article on vasomotor and trophic neurosis. This was without doubt the most comprehensive discussion of this subject which had been published in the English language up to that time. It is now well-recognized that there is a by no means small group of more or less troublesome and unpleasant conditions which, at their outset at least, are not dependent on tangible pathologic changes, but are always associated with disturbances of the circulation in the part affected. In some of these cases there seems to be an excess of blood—a hyperemia—associated with a dilatation of the peripheral vessels. These are described as angioparalytic. In other cases there appears to be less blood than usual in a part, an anemia due to a narrowing of the peripheral vessels. This condition is termed angiospastic. In still other cases there seems to be at the same time, or at different times in the same individual, a mixture of hyperemia or congestion, and anemia or deficiency of blood, in which both angioparalysis and angiospasm are present. To include all three classes it has been proposed to use the term angioneurosis. The condition on which they depend has been designated vasomotor ataxia. This indicates a disorder of the vasomotor mechanism which regulates the circulation.

Included among, or closely related to, these disturbances of function, which have been called angioneuroses, are a great variety of affections. At one end of the list might perhaps be placed Graves' thyroid disease, commonly known in its classic form as exophthalmic goiter, and which is associated with a paralytic condition of the peripheral circulation, and at the other end Reynaud's disease with its condition of local asphyxia and local or symmetrical gangrene, which is associated with a spastic condition of the peripheral circulation. Urticaria and circumscribed edema seem to be associated with a paralytic condition, lesser degrees of which are indicated by such symptoms as unnatural flushing and sweating. Perhaps the best known example of affections of this kind is migraine, in which in some cases there is a congestion of the head with throbbing vessels and heat and redness of the surface which are believed to indicate a vasomotor paralysis or paresis attended with congestion or hyperemia, while in other cases there is no sensation of pulsation but paleness and coolness of the surface, which are believed to indicate vasomotor spasm, attended with anemia of the brain.

The better known and more easily recognized forms of angioneurosis affect the skin, but equally important and equally worthy of careful study are those affecting the viscera. Dr. S. Solis-Cohen, of Philadelphia, has recently published (*New York Medical Journal,* Feb. 19, 26, and Mar. 5, 1910) an extensive study of this subject based on the histories of 200 cases. Cohen's discussion of the subject is so able and timely that we quote him freely. Affecting the respiratory system, not to include hay fever, which is easily recognized as a respiratory neurosis associated with vasomotor disturbance, are edema of the larynx, certain forms of asthma which may be either angioparalytic or angiospastic, spitting of blood, and in some cases edema of the lungs.

In the digestive system are seen cases characterized by pains in various parts of the abdomen, sometimes even simulating appendicitis and suggesting operation, nausea which is often unaccompanied by vomiting; flatulence with eructations of large quantities of gas; vomiting of blood, not associated with ulcer; serious diarrhea, and sometimes bloody stools and hemorrhoids. Many of these gastrointestinal symptoms may be due to thyroid disturbance. There may be attacks of pain simulating hepatic colic so closely that sometimes the gall-bladder has been operated on, but without disclosing any lesion which rendered an operation necessary.

In the genitourinary system occur nephralgia, hematuria, metrorrhagia and menorrhagia, dysmenorrhea, and ovarian neuralgia, and all due to vasomotor disturbance.

In the vascular system occur abnormal pulsation of the vessels, palpitation of the heart, rapid action of that organ, tachycardia, pseudoangina, and purpuric or ecchymotic spots on the skin.

When the brain is affected there may be attacks of temporary aphasia and even temporary hemiplegia.

Although, at the beginning, these vasomotor disturbances are not associated with organic changes, it is within the range of possibility that such frequently repeated and protracted vascular disturbances might ultimately result in permanent organic change.

While these vasomotor disturbances usually occur independently of the organic lesions which their symptoms might simulate, nevertheless it must not be forgotten that organic changes may be present, which are not directly associated with the symptoms of disordered innervation of the blood vessels. These must not be overlooked or neglected, and treatment directed to the functional trouble alone.

The diagnosis of these so-called visceral angioneuroses is not easy, and it is often very difficult to differentiate these "pseudo conditions" from actual lesions of the organs which may cause the same symptoms.

Often considerable light is thrown on these cases by the family history. It will frequently be found that some members of the family have had disorders of metabolism such as diabetes, gout, rheumatism or arthritis deformans, and many have suffered from various nervous disorders, especially those classed as neuroses, such as migraine, epilepsy, hay fever, asthma, neuralgia and insanity.

The personal history also often presents many suggestive facts which point to the conclusion that the symptoms observed are of functional rather than organic origin. Colic, hives or urticaria, epistaxis and migraine are common in children who in later life become the victims of vasomotor neuroses. Later they may have paroxysmal diarrhea, not infectious or inflammatory in origin, polyuria, glycosuria, hay fever, asthma and hemoptysis.

Cohen says: "It should be remembered that two, three and four attacks of an eruptive fever probably represent angioneurosis storms mistaken for measles or scarlet fever. The scarlatiniform or rubelloid attacks are frequently accompanied with nausea, vomiting, abdominal pain, sometimes albuminuria, not rarely fever; and are probably of toxic excitation." The frequency of eruptions from various drugs, fish, strawberries, etc., and the specific susceptibility of some patients to such irritants is generally recognized, but when the well-known causes are not discovered, the diagnosis of an eruptive fever is often made, though the cause may be a simple intestinal irritant.

Among symptoms frequently observed at various times in these subjects of vasomotor disturbances, are congestions of the skin, which are especially frequent in cold weather; factitious urticaria, a name applied to unusual transient swellings, which may or may not become discolored, produced by slight injuries; the so-called dermography, in which, after drawing a probe over the skin a white or red line persists longer than in normal individuals; alterations in the perspiratory function; and changes in the appearance of the nails, especially zones of different colors and shades.

Cohen says that on examining the eyes of these patients the pupils are usually found dilated, the eyelids are often separated to an unnatural degree, the upper lid especially being elevated so that the sclera is seen above the cornea, on lightly closing the lids there is sometimes tremulousness of the lids.

The thyroid gland is sometimes enlarged, palpitation of the heart is frequent and muscular tremor or trembling, either local or general, is not uncommon.

The etiologic factors concerned in the production of these various conditions and symptoms may be briefly summarized as: hereditary influences, toxic conditions, fatigue, exhaustion, and emotional influences such as worry, shock, unusual sorrow or joy, and disappointment. As Cohen intimates but does not declare, all these may be due to disturbed thyroid secretion.

The management of these cases, from their nature, must be considered not alone as regards the first or a single interview, but with reference to a continued course of treatment which will result in the restoration, if possible, of normal physiologic action of the entire neurovascular mechanism.

By preference, the treatment of those individuals who have an inherited tendency to angioneurotic disturbances, should commence in early life, and should consist in the enforcement of regular and not shortened hours of sleep; of regular meals of simple, easily digested and nutritious food; regular and abundant, but not too violent exercise out of doors; moderate and systematic study carried on under careful teachers in such a way that worry is eliminated and over-straining of the mind is avoided; self control must be cultivated; and over-stimulation of the emotions must be prevented by the avoidance of late parties and balls, excessive theater-going and the reading of sensuous literature. All, or most of which means, conserve or fend from over-excitation the thyroid gland, especially in girls from 10 to 20 years of age.

When a condition of toxemia is found to be present, the intestines should be cleaned out by a saline laxative, preceded, if preferred, by calomel, the action of the kidneys should be promoted by a saline diuretic, and skin action should be encouraged by a warm bath.

In some cases, especially when restlessness and insomnia are prominent accompanying symptoms, the bromids are useful, another quieter of the thyroid gland. For the same reason, tea and coffee should be prohibited. The glycerophosphates are also valuable sedatives in this condition.

In other cases, especially if numbness and depression of spirits are present, the aromatic spirit of ammonia is of benefit. Also small doses of iodid (0.05 to 0.10 gm., or 1 to 1½ grains) are valuable as stimulant to a sluggish thyroid.

In edema of the larynx and in those cases of asthma in which there is an angioparalytic condition, the application of adrenalin solution by means of an atomizer often affords astonishing relief.

The organic extracts are often useful in these conditions. Cohen says: "Trembling may be of emotional origin. It is in some instances controlled by the administration of thyroid substance; sometimes by calcium."

When there is a tendency to hemorrhages from angioneurotic congestion, the fluidextract of ergot should be prescribed, or one of the purified aseptic preparations should be administered hypodermatically.

Cancer.—This most terrible of human diseases is of great antiquity. For centuries men of learning have devoted much thought to it; every few years a prophet has arisen with a new theory, a theory eagerly studied by all those desirous of solving the mystery, and again and again we are disappointed, and the origin and cure of cancer remain plunged in the darkness of ignorance. Almost every other branch of medicine has advanced, more especially in the last decade, at an astounding rate. Doubts and difficulties have been cleared up, light has illuminated the darkness, many of our most formidable enemies, tuberculosis, typhoid fever, diphtheria, and malaria, to mention only a few, have been so fully brought to light that they have been rendered comparatively harmless, and we begin to realize the possibility of completely routing them, but in spite of persistent, patient work and the endeavors of some of the greatest minds, cancer still continues undaunted, unconquered.—F. M. Sandwith, in *Medical Press and Circular*.

THE ST. LOUIS SESSION

AMERICAN MEDICAL ASSOCIATION, SIXTY-FIRST ANNUAL SESSION, ST. LOUIS, JUNE 7-10, 1910

ST. LOUIS

MEETING PLACE OF THE SIXTY-FIRST ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION

The 1910 session of the American Medical Association will mark its fourth pilgrimage to St. Louis since its organization. It will, however, be the first meeting of the Association in St. Louis since the reorganization; and instead of a meager few hundred persons who attended the last session here in 1886, the medical profession of St. Louis is preparing to entertain fifteen thousand visitors next June.

To the thousands who will attend the annual convention of this great organization St. Louis smiles a welcome. Lying on the banks of the great gray river, the city stretches her busy limits for a distance of over fifteen miles to the north and the south and from the river westward seven miles. Within this extent she offers many entertaining diversions to the casual visitor and numerous places of interest and instruction to those whose inclinations lead to places made famous in history.

The great Mississippi River has lost that picturesqueness which characterized it in the palmy days of river traffic "befo' de Wah," when Mark Twain piloted the great steamers, and the keen competition between rival boats often brought the people to the river bank to witness the racing monsters fighting for a landing. The center of business activity long ago shifted from the river front to other parts of the city, and the levee is no longer the scene of the busy activity it was aforetime. But the river to-day affords pleasure and diversion to thousands of people, who daily parade the decks of the great excursion steamers as they glide through the smooth waters of the mighty "Father of Waters."

For the information of those who will attend the coming session of the Association, a brief description of the arrangements that have been made for receiving our guests and of some of the places of interest in the city, is appended:

BUREAU OF INFORMATION

Trains from all directions arrive and depart at the Union station, the largest and handsomest Union station in the country, where the twenty-four great arteries of commerce entering St. Louis converge. The great train shed covers thirty-two tracks and three hundred and twenty trains arrive and depart daily. At the Union Station will be located a Bureau of Information, under the charge of members of the St. Louis Medical Society. Upon arrival at the station guests will be greeted by members of the Bureau of Information and of the Reception Committee, who will guide those unfamiliar with the city to their respective hotels, to the meeting places and to any other points that visitors may desire to reach. A small folder will be handed to every physician on his arrival which will contain simple and definite instructions for making one's way about the city. It is the desire of the committee that members of the Association make themselves known to the physicians at the Bureau of Information, all of whom will wear appropriate badges so that they may be readily approached for any information desired. In addition to this attention by the members of the St. Louis Medical Society, all guards, train-callers and employees at the Union Station will be instructed to give special attention to our guests. Other members of the Reception Committee will be stationed at the hotels and lend their assistance in arranging for the prompt and comfortable housing of the members.

MEETING PLACES

The Registration Bureau, Post Office, Commercial and Scientific Exhibits will be located at the Coliseum, at the corner of Washington and Jefferson avenues. It is easily accessible from all parts of the city.

The sections will be grouped in suitable halls located on and near Grand avenue, from Pine street to Finney avenue, a distance of about one-half mile.

The President's reception will be held in the First Regiment Armory Building, at the corner of Grand and Manchester avenues.

THE GUIDE BOOK

The Committee of Arrangements is preparing a Guide Book of St. Louis for free distribution to the members. In this volume, which will contain about 160 pages, will be given an interesting description of the city as a commercial, educational and medical center. It will be a most interesting book for the physician to retain as a souvenir of the meeting. In view of the fact that this Guide Book will contain full information concerning the city and its attractions, this article will be very brief and only suggestive of a few of the entertaining and instructive features that a visit to St. Louis affords at this time.

ST. LOUIS AS A MEDICAL CENTER

With the exceedingly rapid settlement of the southwestern part of the country, of which this city is the natural commercial metropolis, St. Louis became a center of medical instruction early in its history, and a number of medical colleges sprang into existence and flourished for many years. As the demand for higher educational qualifications of the medical graduate increased a number of the colleges were merged, the course of instruction lengthened, the corps of teachers increased and the scope of the curriculum broadened. This tendency towards higher ideals in medical teaching resulted in the consolidation, in 1899, of the Missouri Medical College and the St. Louis Medical College, the two oldest medical institutions in the West. The St. Louis Medical College had enjoyed university connection since 1891, being the medical department of Washington University, and the merger materially strengthened the medical department of the university. Again, in 1901, the Marion-Sims College of Medicine and the Beaumont Hospital Medical College were consolidated, and two years later university connection was acquired by affiliation with the St. Louis University, thus becoming the medical department of that institution.

The medical department of Washington University is located at 1806 Locust street. It can be reached by the Olive street cars, the Eighteenth street line and any car line on Washington avenue.

The medical department of St. Louis University is at Grand avenue and Caroline street. It is reached by the Grand avenue line and the Compton Heights car.

HOSPITALS

In April of this year, the Municipal Assembly passed an ordinance providing for an entirely new system of managing the eleemosynary institutions of the city, and in future the city charity hospitals will be under the control of a hospital board, the members of which will be appointed by the Mayor. The hospital board will appoint a hospital commissioner who will have charge of the business affairs of all the institutions, under the direction of the hospital board. A visiting staff of physicians, also appointed by the hospital board, will control the medical affairs of the hospitals and all inmates will be under the direct charge of the visiting staff.

CITY HOSPITAL

The City Hospital is composed of a group of buildings, eight in number at the present time, with three additional buildings now in course of construction. All the buildings are connected by closed corridors except the building for contagious diseases. The medical and surgical buildings are three stories high with an attic floor for observation and detention cases. The operating rooms are in a separate building, and another building houses the bacteriologic and pathologic laboratories. Of the three new buildings now being erected, one will be the administration building and the other two will be used for medical and surgical cases. The administration building will be five stories high and the ward buildings four stories, with operating rooms on the top floor. All buildings are fireproof and built according to the most approved principles of modern hospital construction. The present capacity of the hospital is 505; this will be increased to 900 when the new buildings are complete. During the year ending March 31, 1910, 10,961 patients were admitted.

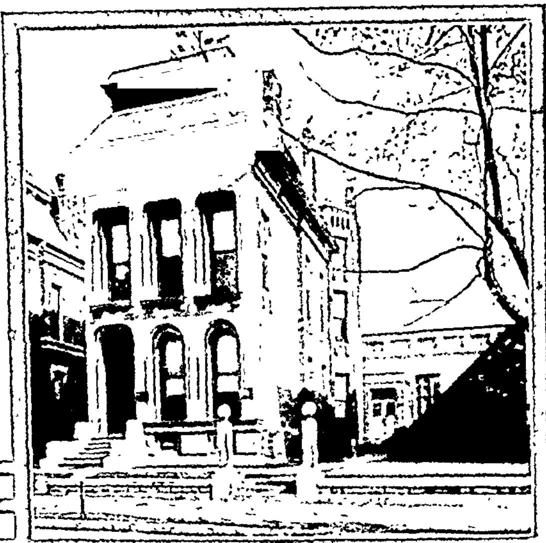


Fig. 1.—The buildings of the St. Louis Medical Library Association and the St. Louis Medical Society (in the rear). Meeting place of the House of Delegates, 3525 Pine Street.

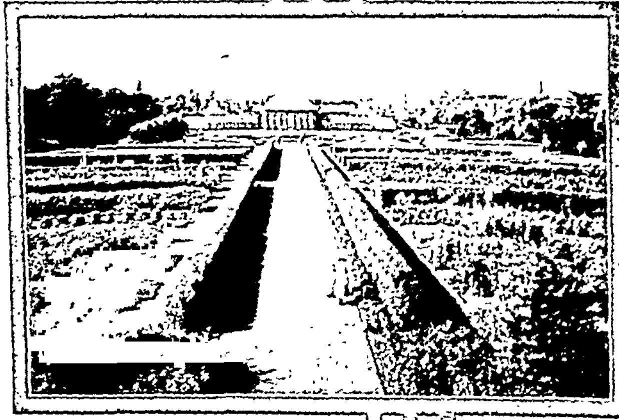


Fig. 2.—A view of Shaw's Garden, Tower Grove Avenue, one of the two most celebrated botanical gardens in the United States. At the time of the meeting the garden will be in full array. Here is to be held one of the special entertainments provided for the ladies, an afternoon lawn fête, with refreshments.

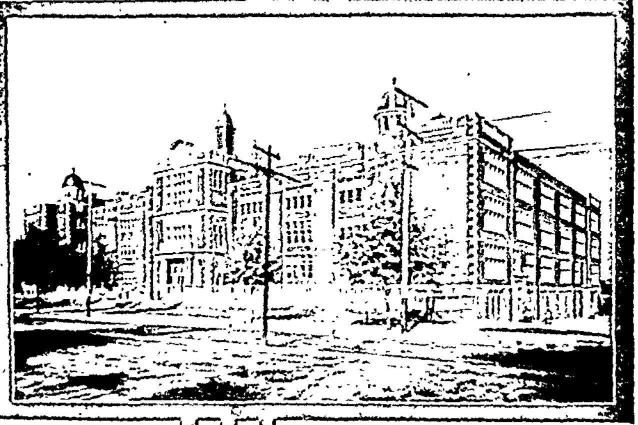


Fig. 3.—Soldan High School (public), one of the largest school buildings in this country, having accommodations for 2,250 pupils.

Fig. 4.—The Woman's Club, 3621 Washington Avenue, west of Grand. A reception for the ladies will be held here Tuesday afternoon.

ST. LOUIS SKIN AND CANCER HOSPITAL

The St. Louis Skin and Cancer Hospital was established in 1906 with funds contributed by a few public-spirited citizens who realized the need of an institution of this character. Its usefulness was quickly appreciated as the large number of patients who applied for treatment fully demonstrated, and the permanency of the institution was then assured through the munificence of Mr. Geo. D. Barnard.

It is wholly charitable, no pay patients being admitted to the hospital or treated in the out-clinic department. In thus limiting the class of diseases to be treated greater opportunities are afforded the medical staff to study the conditions, with the special object of devising more successful methods of treatment than have yet been discovered, particularly as regards the alleviation and cure of cancer. With this special object in view a research department has lately been added to the equipment and an endowment fund is now being raised to perpetuate the usefulness of this department. Dr. Leo Loeb of Philadelphia has accepted the position of director of the research laboratory and will take charge early in the fall. The new four-story building, at Theresa Avenue and Washington Avenue is now under roof; here the facilities for prosecuting the work will be materially increased and a larger number of patients can be cared for. At present the hospital is located at Jefferson and Washington Avenues, opposite the Coliseum.

AS AN EDUCATIONAL CENTER

SCHOOL OF MECHANICAL TRADES

St. Louis has always ranked high as an educational center. The first manual training school in America was established here under the direction of Prof. C. M. Woodward of Washington University. Recently the School of Mechanical Trades was founded by Mr. David Ranken, Jr., which he has endowed with over two million dollars.

ST. LOUIS UNIVERSITY

The St. Louis University is the oldest institution of learning west of the Mississippi River. It was founded in 1818 by the Right Reverend Louis William Dubourg, Bishop of St. Louis, as the St. Louis Academy. Under his direction it grew into the St. Louis College, and, in 1827, the institution was turned over to the Jesuits, who continued the work under the name of the St. Louis University. It has an unbroken record of yearly sessions since its inception, and has been a potent factor in the growth and development of the city. The faculties of the various departments have a teaching corps of 200 professors and assistants. The principal building is located at Grand Avenue and Pine Street. It is reached by the Grand Avenue cars and the Laclede and Olive Street lines.

WASHINGTON UNIVERSITY

Washington University was founded by the Reverend William G. Eliot in 1853, to whom a charter was issued for conducting the Eliot Seminary. The original charter was issued on Washington's birthday and the first meeting of the coporation occurred on the same anniversary a year later, at which time Dr. Eliot expressed a desire that the name of the institution be changed. Since the charter had been issued on Washington's birthday and the first meeting of the corporation had occurred on the same anniversary, it was decided to change the name to Washington Institute, and several years later this was changed to Washington University. From its earliest beginning, when the teaching was done at night in a building on Sixth street, the institution has grown to large proportions and is now one of the strongest educational institutions in the country. All the departments usually embraced in university work are represented, including the Mary Institute, a school for girls, and the Henry Shaw School of Botany. The main buildings are located in the western outskirts of the city, and can be reached by the Delmar car on Olive Street.

PLACES OF INTEREST

The Missouri Botanical Garden (Shaw's Garden) is the gift of the late Mr. Henry Shaw, who also gave to the city one of its most beautiful parks—Tower Grove Park. Shaw's Garden is one of the most celebrated botanical gardens in the country. Here the student of plant life finds conditions ideal for study and experimentation in the investigation of vegetable physiology and pathology. The herbarium contains over 600,000 sheets of specimens and the collection of living plants exceeds 10,000 species or varieties. It is permanently endowed with funds supplied by Mr. Shaw. It is a most attractive spot at all seasons of the year because of the large collection of plants under glass; but it is especially enchanting in the growing season when the plants are in full bloom, as they will be during the meeting of the Association. The Garden will be the scene of an entertainment for the ladies on one afternoon during the session.

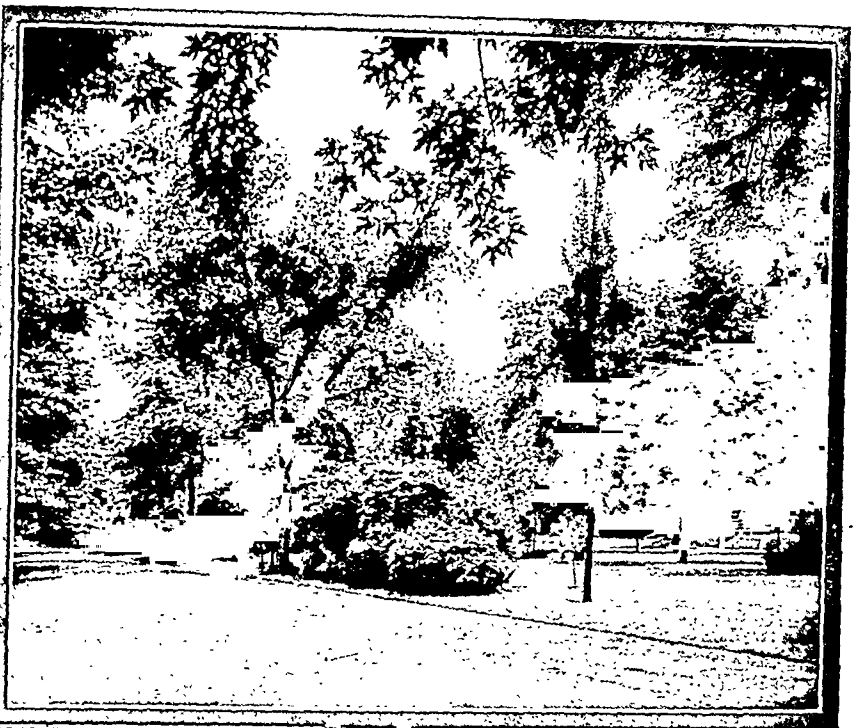


Fig. 6.—Vandeventer Place, one of the restricted residence districts. It has an entrance on Grand Avenue in the middle of the section meeting-place district.

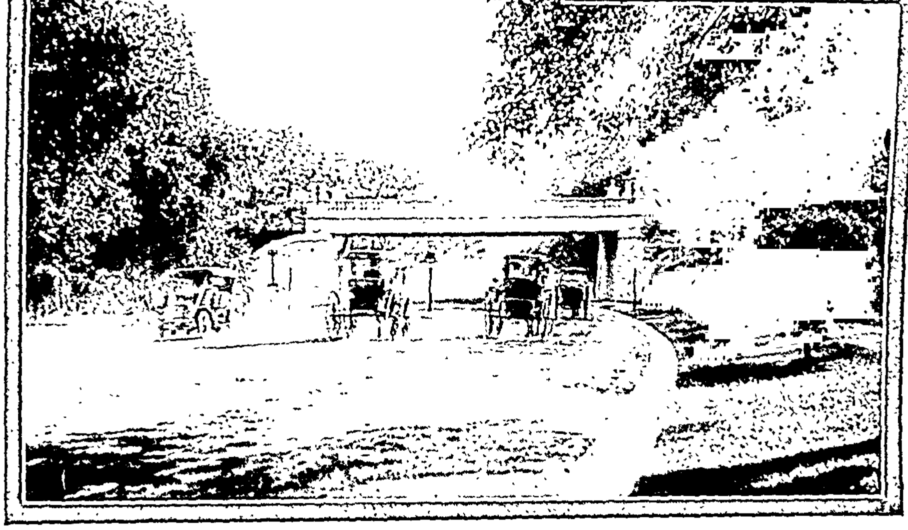


Fig. 5.—Lindell Boulevard entrance to Forest Park.

ART MUSEUM

The Art Museum is located on Art Hill in Forest Park. In 1909 the city authorized a tax to support a municipal art museum and the St. Louis School of Fine Arts, a department of Washington University, placed its museum collection in the Art Museum, the management of the school and of the Art Museum then being made separate. In the sculpture galleries of the Museum there are examples of the work of different periods of art history from Egyptian art to the time of Michael Angelo, besides a large collection of later works, including a very comprehensive representation of American sculptors. The collection of paintings is large and comprehensive and includes examples of work done in all art centers of the world. The School of Fine Arts gives instructions in all branches of art work, aiming to fit the students not only for painting and sculpture, but as skilled artist-workmen.

PARKS

St. Louis has many beautiful parks and play-grounds, the most noted of which perhaps is Forest Park, where the World's Fair was located in 1904. It is one of the largest parks in the country, containing over 1,300 acres. Lafayette Park, before the tornado in 1896 swept it almost bare, was considered to be one of the most picturesque parks in the country; it is being rapidly restored to its original beauty. Over 144 acres of ground were purchased recently for parks and play-grounds at a cost of more than $1,393,000.

The summer gardens attract thousands of people nightly. The principal ones are the Suburban Garden, Delmar Garden, and Forest Park Highlands. The Committee on Arrangements will lease Forest Park Highlands for one night during the meeting for the exclusive use and entertainment of the members of the Association.

E. J. Goodwin, Secretary
Local Committee on Arrangements.

THE SCIENTIFIC PROCEEDINGS

The Papers to Be Read at St. Louis—The Preliminary Program and the Official Program

The following is a partial list of titles of papers to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program. This Official Program will be a pamphlet similar to those issued in previous years, and will contain the final program of each section, with abstracts of the papers, lists of committees, programs of the General Meeting and of the meetings of the House of Delegates, lists of entertainments, map of St. Louis, etc. To prevent misunderstandings and to protect the interests of advertisers, etc., it is here announced that this Official

Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each member on registration.

SECTION ON PRACTICE OF MEDICINE

CHAIRMAN, GEORGE BLUMER, NEW HAVEN, CONN.; SECRETARY, WILDER TILESTON, NEW HAVEN, CONN.

Experiences with the Duodenal Contents in man (15 minutes). Max Einhorn, New York.

The Radical Cure of Malaria; Its Importance and How It May be Attained (15 minutes). Seale Harris, Mobile.

Urinary Hyperacidity and Its Relation to Neuritis, Neuralgia and Myalgia (15 minutes). Thomas R. Brown, Baltimore.

Oration on Medicine: A Study of Mistaken Diagnoses Based on the Autopsy Findings in One Thousand Cases. Richard C. Cabot, Boston.

Magnesium Poisoning; A Study of Ten Cases (15 minutes). William F. Boos, Boston.

Certain Popular but Erroneous Notions Concerning Angina Pectoris (15 minutes). James B. Herrick, Chicago.

Orthodiagraphy: A Presentation of a Series of Diagrams of the Heart and Aorta, with Explanatory Remarks (10 minutes). Thomas A. Claytor and Walter H. Merrill, Washington.

The Diagnostic Value of the Orthodiagram (10 minutes). James G. van Zwaluwenburg, Ann Arbor, Mich.

Persistent Patency of the Ductus Arteriosus, Stenosis of the Isthmus of the Aorta, with Degeneration of the Coronaries of the Cardiac Muscle and of the Sino-Auricular Bundle (10 minutes). Kate C. H. Mead, Middletown, Conn.

Regional Vasomotor Hypertonus, with a Report of a Case (15 minutes). C. F. Hoover, Cleveland.

The Electrocardiogram in Clinical Diagnosis (15 minutes). L. F. Barker and A. D. Hirschfelder, Baltimore.

Hookworms; Infection and Prevention (15 minutes). Claude A. Smith, Atlanta, Ga.

Pathologic Relationship of Ulcer and Carcinoma of the Alimentary Canal (20 minutes). Louis Wilson, Rochester, Minn.

The Importance of a Low Protein Diet in Chronic Nephritis (15 minutes). H. D. Arnold, Boston.

The Relation of Blood Platelets to Bleeding in Certain Cases of Purpura (15 minutes). W. W. Duke, Baltimore.

Fig. 7.—The Colonial Club, the large Jewish club of St. Louis.

A Case of Diffuse Purulent Ventriculoseptal Myocarditis with Adams-Stokes Syndrome (10 minutes). Harvey G. Beck and William Royal Stokes, Baltimore.

A Study of a Case of Heart-Block with Auricular Alternating Pulse (10 minutes). Isaac I. Lemann. New Orleans.

A Possible Cardiac Dilatati . Effusion (15 minutes). W. J. Calvert, Dallas, Texas.

Symposium on the Circulatory Disorders in Acute Infections. Joint Meeting with the Section on Pharmacology and Therapeutics

Pathologic Physiology of the Circulatory Failure of Acute Infectious Disease (20 minutes). W. G. MacCallum. New York.

Treatment of the Circulatory Failure of Acute Infectious Diseases by Drugs Other than Alcohol (20 minutes). George Dock, New Orleans.

The Physiologic Action, Uses and Abuses of Alcohol in the Circulatory Disturbances of Acute Infections (20 minutes). Joseph L. Miller, Chicago.

The Action of Alcohol on the Mammalian Heart. A. N. Richards, Chicago.

Extra Pharmacal Measures in the Treatment of Circulatory Failure of Acute Infections (20 minutes). W. S. Thayer, Baltimore.

The Visceral Anesthesias of Tabes Dorsalis in Relation to the Diagnosis of Acute Inflammatory Conditions in the Abdomen, with an Illustrative Case (15 minutes). Lewis A. Conner, New York.

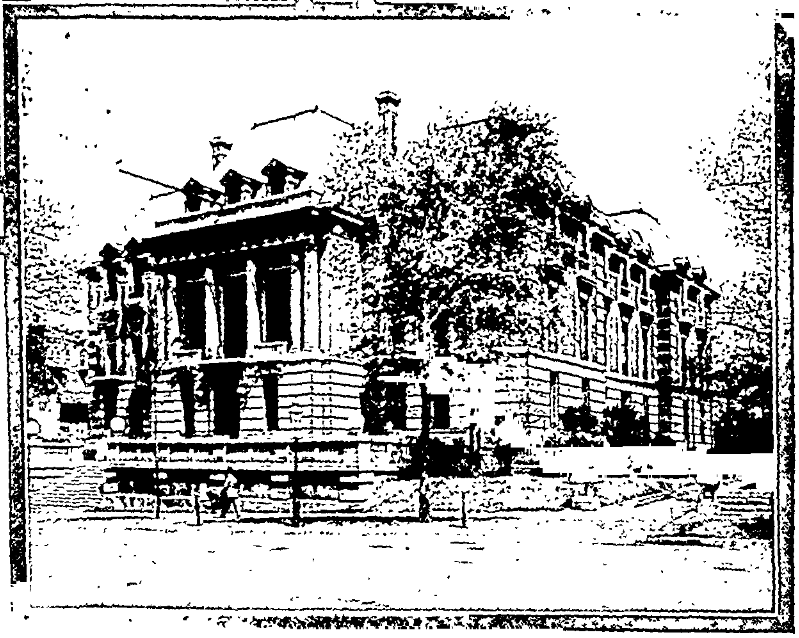


Fig. 8.—The St. Louis Club.

Clinical Results of Gastroenterostomy for Non-Malignant Diseases (10 minutes). John D. Dunham, Columbus, Ohio.

The Influence of Perigastric Lesions on Gastric Secretions, Based on Clinical and Experimental Study (15 minutes). M. J. Lichty, Cleveland.

The Roentgen Ray in the Diagnosis of Diseases of the Alimentary Tract (20 minutes). Judson Daland and George E. Pfahler, Philadelphia.

The Different Forms of Mediastinal Exudative Pleurisy, with Report of Three Cases (15 minutes). Anders Frick, Chicago.

The Diagnostic Significance of the Paravertebral Triangle of Percussion Dulness (Grocco's Sign) (5 minutes). Frank Smithies, Ann Arbor, Mich.

Autogenous Vaccine Therapy in Endocarditis (15 minutes). Edward C. Rosenow, Chicago.

The Treatment of Typhoid Carriers, with Report of a Case Treated by Inoculations of Typhoid Vaccine (15 minutes). Willard J. Stone, Toledo, Ohio.

Indicanuria (10 minutes). Gustav Baar, Portland, Ore.

SECTION ON SURGERY

Chairman, Charles H. Mayo, Rochester, Minn.; Secretary, William D. Haggard, Nashville, Tenn.

Chairman's Address: Prophylaxis of Cancer. Charles H. Mayo, Rochester, Minn.

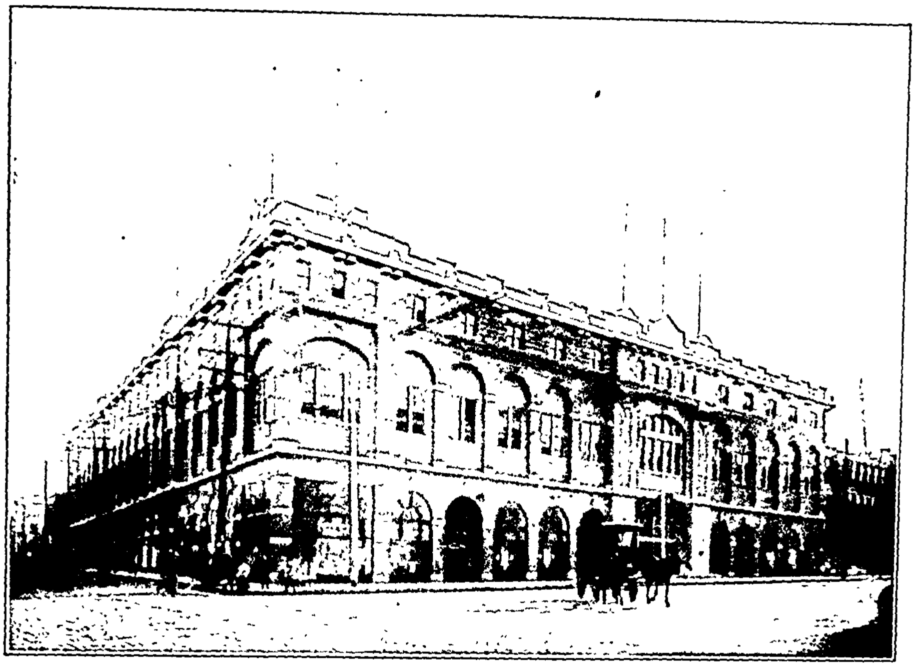


Fig. 9.—The Coliseum, Jefferson and Washington Avenues. Here are located the Registration Bureau, the branch Postoffice, the Scientific Exhibit, the Commercial Exhibit and the Bureau of Information.

Surgical Treatment of Compression Paraplegia. A. Primrose, Toronto.

Anastomosis of Facial and Spinal Accessory Nerves and the Distal End of Spinal Accessory with Descending Hypoglossal. W. W. Grant, Denver.

Injuries of Abdominal Viscera without External Signs of Violence. Henry H. Sherk, Pasadena, Cal.

Present Status of Vaccine Therapy. Ernest E. Irons, Chicago.

Appendicitis in Children, with Report of 500 Cases. H. C. Deaver, Philadelphia.

Tuberculosis of Adult Knee-Joint, with New Theory and Plan of Operation. Leonard W. Ely, New York.

Report of the Commission on Anesthesia.

Acute or Chronic Joint Infections. J. B. Murphy, Chicago.

Open Treatment of Fractures. A. F. Jonas, Omaha, Neb.

Congenital Atresia of the Ureter. J. T. Bottomley, Boston.

Extracapsular Fixation of the Kidney. Charles A. L. Reed, Cincinnati.

Traumatic Rupture of the Fixed Portion of the Male Urethra. Otto C. Gaub, Pittsburg, Pa.

Suppuration in One-Half of a Horseshoe Kidney. J. E. Thompson, Galveston, Texas.

Surgical Considerations in Treatment of Chronic Suppurative Nephritis. D. S. Fairchild, Clinton, Iowa.

Kidney and Ureteral Stones. Miles F. Porter, Fort Wayne, Ind.

Surgery of Congenital Cystic Kidney. T. C. Witherspoon, Butte, Mont.

Phrenitis Prostatica. J. F. Percy, Galesburg, Ill.

Partial Thyroidectomy in Dementia Præcox. Randolph Winslow, Baltimore.

Certain Surgical Aspects of Goiter. G. W. Crile, Cleveland.

Diagnosis and Treatment of Esophageal Lesions. H. S. Plummer, Rochester, Minn.

Surgical Management of Suppurative Peritonitis. A. D. Bevan, Chicago.

Conservative Surgery of the Pelvis and Lower Abdomen. F. W. McRae, Atlanta, Ga.

Some Further Experience with Drainage of Pelvic Abscess Through the Rectum. A. MacLaren, St. Paul, Minn.

Temporary and Permanent Occlusion of the Large Arteries with Removable Metallic Bands. Rudolph Matas and C. W. Allen, New Orleans.

Diagnosis of Mammary Cancer. William L. Rodman, Philadelphia.

Operative Treatment of Cancer of the Breast. Maurice Richardson, Boston.

Physiologic Implantation of Severed Ureter of Bile-Duct into the Intestine. R. C. Coffey, Portland, Ore.

A Further Consideration of Cholecystenterostomy in Certain Cases of Pancreatitis. Le Grand Guerry, Columbia, S. C.

Pathology of Gall-Bladder and Gall-Tract. J. P. Runyan, Little Rock, Ark.

Inguinal Hernia Following Appendectomy. A. M. Pond, Dubuque, Iowa.

Teaching the Principles of Surgery; The Ideal and the Practical. Martin B. Tinker, Ithaca, N. Y.

Gunshot Wounds in Modern Wars. Louis A. La Garde, Washington, D. C.

Post-Operative Gastric Hemorrhage. Donald Macrae, Jr., Coucil Bluffs, Iowa.

Surgical Constipation (Obstipation) and Its Treatment. S. G. Gant, New York.

A Simple Operation for Hemorrhoids without Hemorrhage. Louis J. Hirschman, Detroit.

Surgical Diseases of the Umbilicus. Thomas S. Cullen, Baltimore.

SECTION ON LARYNGOLOGY AND OTOLOGY

Chairman, Chevalier Jackson, Pittsburg; Secretary, George E. Shambaugh, Chicago

Chairman's Address. Chevalier Jackson, Pittsburg, Pa.

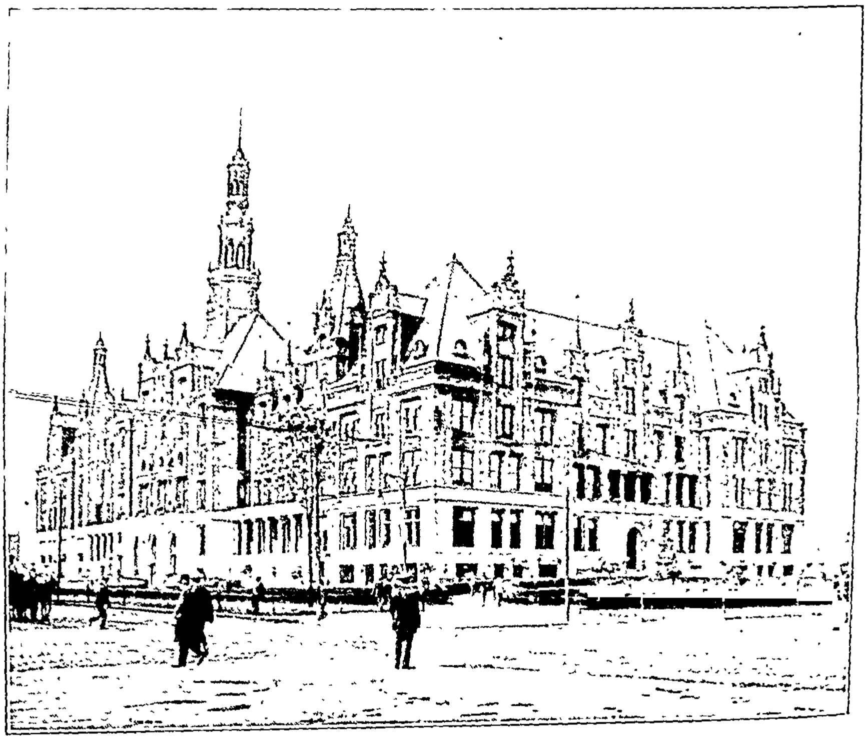


Fig. 10.—The City Hall, Twelfth, Market and Clark Streets.

In Memoriam: Wilhelm Meyer. Holger Mygind, Copenhagen, Denmark.

Clinical Observations on Nasal Diphtheria. Dunbar Roy, Atlanta, Ga.

The Comparative Pathology of Hyperplastic and Suppurative Ethmoiditis. Ross Hall Skillern, Philadelphia.

Intraocular Complications from Pansinuitis; Results Following Intranasal Operations. Harmon Smith, New York.

The Bronchoscopic Treatment of Bronchial Asthma. Henry Horn, San Francisco.

Observations on the Vocal Cords in One Thousand Cases of Goiter. Justus Mathews, Rochester, Minn.

Symposium on Faucial Tonsils

The Tuberculous Tonsil. Robert Levy, Denver.

Conditions Demanding Enucleation of the Faucial Tonsils. Joseph C. Beck, Chicago.

Enucleation of the Faucial Tonsils and Contraindications for This Procedure. Burt R. Shurly, Detroit.

Symposium on Otitic Meningitis

Symptomatology and Diagnosis of Meningitis of Otitic Origin. Edward Bradford Dench, New York.

Fig. 11.—Planters' Hotel, Pine, Chestnut and Fourth Streets, headquarters of Sections on Practice of Medicine, Pathology and Physiology and Pharmacology and Therapeutics.

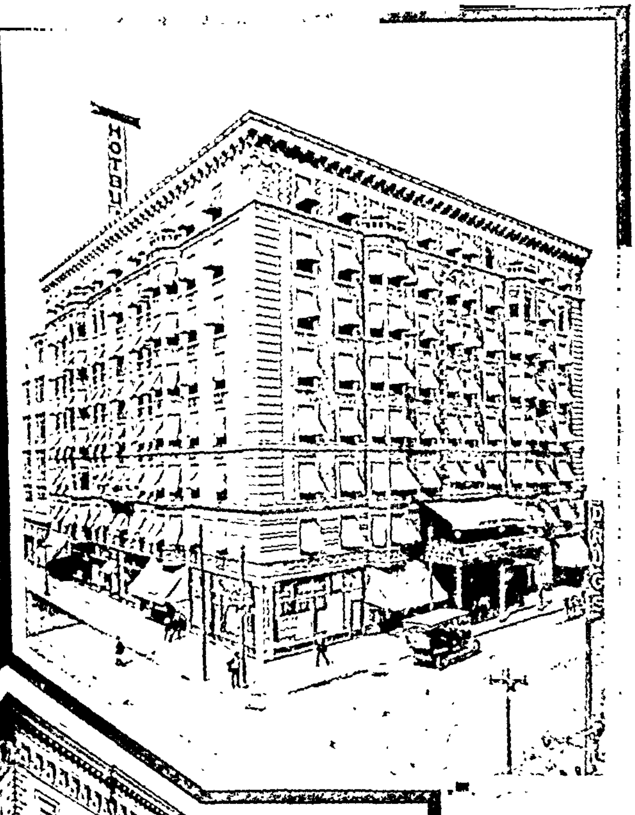


Fig. 12.—Maryland Hotel, Ninth and Pine Streets.

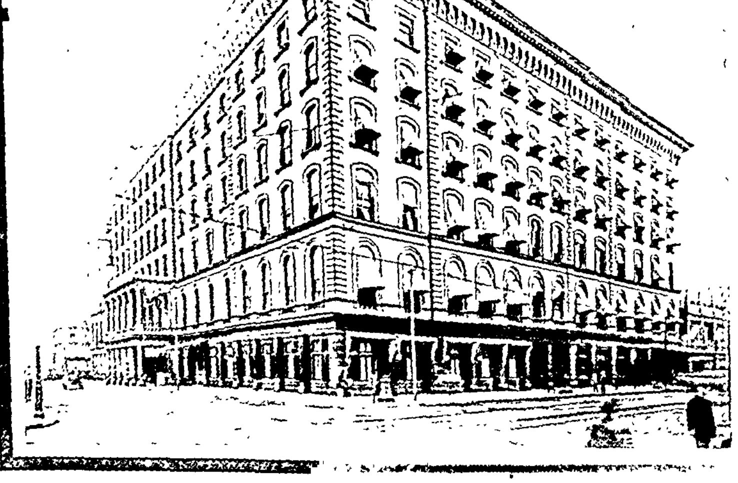


Fig. 13.—Southern Hotel, Broadway, Fourth and Walnut Streets, General Headquarters.

Indications for Surgical Interference for the Relief of Otitic Meningitis. S. MacCuen Smith, Philadelphia.

The Surgical Treatment of Otitic Meningitis. Holger Mygind, Copenhagen, Denmark.

The Results of the Operation of Submucous Resection of the Septum in Private Practice. Francis P. Emerson, Boston.

Submucous Resection of the Nasal Septum. Clyde E. Purcell, Paducah, Ky.

Exhibition of Patients and Instruments.

The Pathology of Mastoiditis as Revealed by the X-Ray. Sidney Lange, Cincinnati.

Neuralgias and Functional Disturbances Occurring in the Head and Neck Arising from Infections in and About the Tonsil. Frank C. Todd, Minneapolis.

The Development of the Human Temporal Bone. (Lantern-Slide Demonstration). George W. Boot, Evanston, Ill.

A Study of the Bacterial Flora of the Nasal Mucosa. Will Walter, Chicago.

Symposium on Labyrinthine Suppuration

The Pathology and Prognosis of Internal Ear Complications Resulting from Inflammatory Midle-Ear Diseases. (Lantern-Slide Demonstration). Jacques Holinger, Chicago.

The Symptoms and Diagnosis of Infections of the Labyrinth Resulting from Chronic Suppurative Otitis Media. J. R. Fletcher, Chicago.

The Present Status of Vertigo Considered from a Diagnostic Standpoint. George E. Davis, New York.

The Difficulties and Dangers Associated with Operations on the Labyrinth. J. D. Richards, New York.

Scientific Exhibit: Oral Eustachian Catheter. Ephraim Cutter, West Falmouth, Mass.

Histologic Specimen Showing Pathology of Labyrinth Infection. Jacques Holinger, Chicago.

Preparations showing (a) Cholesteatoma of Middle Ear with Defect in the Horizontal Semicircular Canal and Infection of the Labyrinth; (b) Cholesteatoma of Middle Ear *with Defect in Horizontal Canal Without Infection of the Labyrinth.* Henry Horn, San Francisco.

Normal Histologic Specimens Showing: (a) the Organ of Corti; (b) Attachment of Hairs of Hair Cells to *Membrana Tectoria*; *(c) the End Organ in the Ampulla—the Crista Ampullaris*; (d) the End Organ in the Utricle and the Saccule—the Macula Acustica. George E. Shambaugh, Chicago.

Anatomic Preparations Showing the Developing Temporal Bone. George W. Boot, Evanston, Ill.

Anatomic Preparations of the Nose and the Nasal Accessory Sinuses. H. W. Loeb, St. Louis.

Apparatus for Determining the Presence of Pus in the Accessory Cavities by Means of Negative Pressure. Henry Horn, San Francisco.

Sections of Infant Heads. Frederick Menge, Chicago.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN

CHAIRMAN, JOHN G. CLARK, PHILADELPHIA; SECRETARY, C. JEFF MILLER, NEW ORLEANS

Infections of the Endometrium. William S. Gardner, Baltimore.

The Plastic Surgery of the Pelvic Structures. Henry O. Marcy, Boston.

Arteriosclerosis of the Uterine Vessels. Sidney A. Chalfont, Pittsburg,

The Report of Three Cases of Pregnancy Following Double Salpingectomy. John Osborn Polak, Brooklyn.

An Ideal Operation for the Cure of Total Prolapse of the Uterus. Samuel Wyllis Bandler, New York.

Papillary Cystadenoma of the Kidney, Associated with Myoma of the Uterus and Spinal Caries. G. E. Shoemaker, Philadelphia.

Uselessness of Local Treatment in Puerperal Sepsis. J. H. Carstens, Detroit.

Fig. 14.—Statue of von Humboldt in Tower Grove Park.

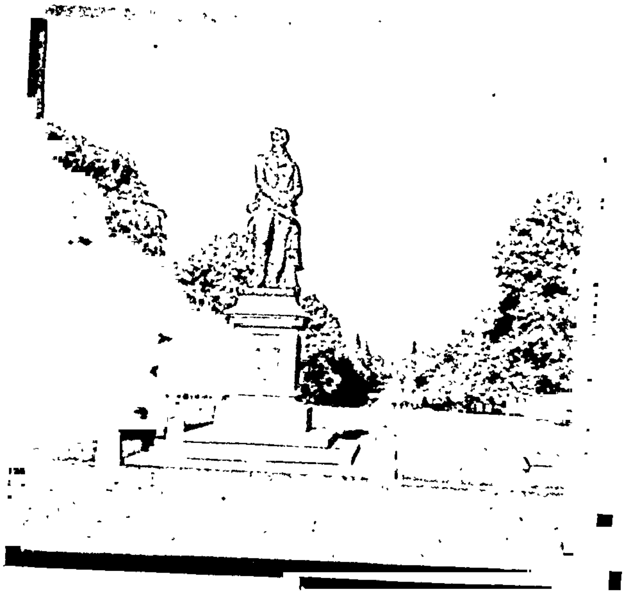


Fig. 15.—Park View. This and Kingsbury Place, also shown on this page, are two of the restricted residence districts, of which there are many in St. Louis.

Fig. 16.—Lindell Boulevard, with the St. Regis Apartments on the right.

Symposium on Observations by Inventors of Operations for Retroflexion of the Uterus

Plication of the Round and Anterior Fold of the Broad Ligament on the Anterior Surface of the Uterus for Retrodisplacement. R. C. Coffey, Portland.

Attachment of Ligaments Posterior to the Uterus. J. M. Baldy, Philadelphia.

Intraperitoneal Implantation of Round Ligaments. (Gilliam's Operation.) D. Tod Gilliam, Columbus, Ohio.

Intraperitoneal Shortening of Round Ligaments. (Simpson Operation). F. F. Simpson, Pittsburg.

Shortening of the Round Ligaments Via the Temporarily Dilated Inguinal Canals Combined with the Bassini Technic in Closure of the Wounds. A. Goldspohn, Chicago.

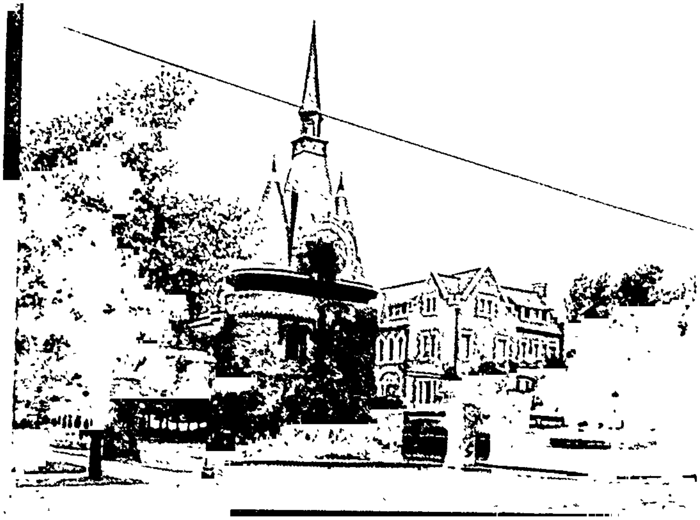


Fig. 17.—Kingsbury Place, a residence view.

Operations on the Uterosacral Ligaments for Displacements of the Uterus. J. Wesley Bovée, Washington, D. C.

Suspensio Uteri. Howard A. Kelly, Baltimore.

Chairman's Address: Embryologic and Anatomic Causes for Obstinate Constipation in Women: Operative Methods for Relief. John G. Clark, Philadelphia.

Symposium on Enteroptosis

Enteroptosis, with Special Reference to Its Etiology and Development, and Remarks on the Results of Examination of 400 Women, with Reference to This Condition. Richard R. Smith, Grand Rapids, Mich.

The X-Ray in the Diagnosis of Enteroptosis. E. H. Skinner, Kansas City, Mo.

Value of the Roentgen Ray in Enteroptosis. A. W. Crane, Kalamazoo, Mich.

The Physician's Viewpoint. J. H. Musser, Philadelphia.

The Surgical Viewpoint. A. J. Ochsner, Chicago.

Tuberculosis of the Female Organs of Generation and the Peritoneum. J. Riddle Goffe, New York.

Symposium on Carcinoma of the Uterus

Our Present Knowledge of the Etiology of Cancer. Harvey Gaylord, Buffalo, N. Y.

The Participation of the Glandular System and Tissues Adjacent to the Uterus in Carcinoma of the Uterus. John A. Sampson, Albany, N. Y.

The Results Obtained by the Radical Abdominal Operation for Carcinoma of the Uterus. J. H. Jacobson, Toledo, Ohio.

The Diagnosis of Operability of Carcinoma of Cervix Uteri. Emil Ries, Chicago.

Further Observations on the Use of the Cautery in the Treatment of Carcinoma of the Uterus. C. C. Frederick, Buffalo.

Treatment and Cure of Inoperable Cases of Carcinoma of the Uterus. Palmer Findley, Omaha.

The Ureter in Pelvic Surgery. Channing W. Barrett, Chicago.

Symposium on Eclampsia

The Etiology of Eclampsia. E. P. Davis and Collin Foulkrod, Philadelphia.

Medical Treatment, Diagnosis and Treatment of Eclampsia. C. S. Bacon, Chicago.

Treatment of Eclampsia, Including a Comparison of the Dangers of Chloroform and Ether in This Condition. Edwin B. Cragin and Edward T. Hull, New York.

The Surgical Treatment of Eclampsia. Joseph B. DeLee, Chicago.

Vaginal Cesarean Section in Eclampsia. Henry D. Fry, Washington, D. C.

Indications for and Technic of Rapid Emptying of the Uterus in the Toxemias of Pregnancy. Reuben Peterson, Ann Arbor, Mich.

SECTION ON NERVOUS AND MENTAL DISEASES

Chairman, Theodore Diller, Pittsburg; Secretary, William A. Jones, Minneapolis

Chairman's Address: The Institutional Treatment of Nervous and Mental Diseases. Theodore Diller, Pittsburg, Pa.

Pathology of Anterior Poliomyelitis. H. E. Robertson, Minneapolis.

Poliomyelitis and Its Treatment. Smith Ely Jelliffe, New York.

The Surgical Treatment of Anterior Poliomyelitis. David Silver, Pittsburg.

The Topographical Diagnosis of Subtentorial Tumors. Herman H Hoppe, Cincinnati.

Fig. 18.—Jewish Hospital, Delmar Avenue, near Belt.

Fig. 19.—Present buildings of the City Hospital.

Fig. 20.—Missouri Baptist Sanitarium, North Taylor Street.

Case of Tumor of the Pineal Gland Involving Cerebellum with Cerebellar Shocks. Charles L. Dana, New York.

Brain Tumor of the Psychomotor Area. Frank Warren Langdon and Simon P. Kramer, Cincinnati.

The Differential Diagnosis of Pelvic Tumors from Tumors of the Lumbosacral Cord and Cauda Equina. Charles K. Mills, Philadelphia.

Intradural Tumor of Lower Cervical Cord with Operation. Edward E. Mayer and Otto C. Gaub, Pittsburg, Pa.

Tumor of the Cerebello-Pontile Angle. Julius Grinker, Chicago.

Syphilitic Disease of Arteries of the Central Nervous System; with Detailed Report of a Case. E. M. Hummel, New Orleans.

Amyotonia Congenita. A. L. Skoog, Kansas City, Mo.

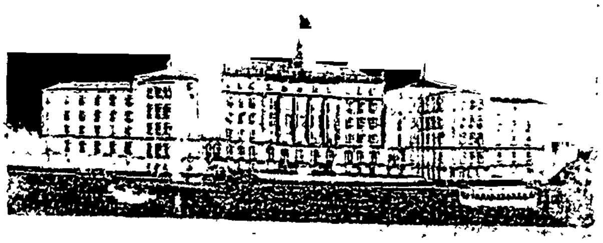


Fig. 21.—The new buildings of the City Hospital, Lafayette and Grattan Avenues, now under construction on grounds adjoining the present buildings shown in Figure 19.

Pathogenesis of the Toe Phenomenon. Alfred Gordon, Philadelphia.

Radicular Changes in Meningitis and Other Conditions. John H. W. Rhein, Philadelphia.

Address: The Eye and Its Relation to Neurology. Alfred Saenger, Hamburg, Germany.

The Functions of the Psychopathic Hospital. Albert M. Barrett, Ann Arbor, Mich.

Prevention of Insanity by the Treatment of Incipient Cases in General Hospitals. L. Vernon Briggs, Boston.

Nervous and Mental Disturbance at the Male Climacteric. Archibald Church, Chicago.

Manual Work in the Treatment of the Functional Nervous Diseases. Herbert J. Hall, Marblehead, Mass.

The Treatment of Nervous Diseases by Gymnastics and Massage. Haldor Sneve, St. Paul, Minn.

The State Care of the Inebriate. Irwin H. Neff, Foxborough, Mass.

Treatment of Stuttering. E. W. Scripture, New York.

The Relation of Stuttering to Amusia. E. Bosworth McCready of Pittsburg, Pa.

The Plea of Insanity as a Defense for Crime and Its Remedy. John Punton, Kansas City, Mo.

Hemiplegia Following Acute Infections. W. A. Jones and A. S. Hamilton, Minneapolis.

A Case of Crossed Hemidysergia. Tom A. Williams, Washington, D. C.

Treatment of Acute Ailments Occurring in Persons Addicted to Narcotic Drugs. George E. Pettey, Memphis, Tenn.

Twenty Years of Electrocution. George Edward Fell, Buffalo, N. Y.

Alcohol Injections in Trifacial Neuralgia. Hugh T. Patrick, Chicago.

SECTION ON STOMATOLOGY

Chairman, Thomas L. Gilmer, Chicago; Secretary, Eugene S. Talbot, Chicago

Chairman's Address: Composite Odontomata; Report of Four Cases. Thomas L. Gilmer, Chicago.

Growth and Regeneration of the Bones of the Face. Stewart L. McCurdy, Pittsburg.

Conservation of General Health of Children Through Overcoming the Inclination Toward Nasal Stenosis by Means of Widening the Maxillary Arch. Nelson M. Black, Milwaukee.

The Influence of Widening the Palatal Arch on the Nose. Lee Wallace Dean, Iowa City.

The Relation of the Teeth to the Development of the Face. Frederick Noyes, Chicago.

Symposium on the Education of the Stomatologist. Eugene S. Talbot, Chicago; James E. Power, Providence, R. I.; M. H. Cryer, Philadelphia; James G. Sharp, San Francisco.

The Teeth as a Factor in Pathogenesis. Herbert A. Potts, Chicago.

Septicemia of Dental Origin. Arthur R. Dray, Philadelphia.

The Mouth Lesions of Syphilis and the Dangers Arising from Them. Charles M. Whitney, Boston.

The Relation of Pathologic Conditions of the Mouth and Systemic Disease. Henry R. Harrower, Chicago.

The Value of Vaccines in Oral Surgery. James E. Power, Providence-Boston.

The Teeth and Alveolar Processes as Points of Entrance for the Tubercle Bacillus. Frederick Moorehead, Chicago.

The Close Relations Between the Dentist and the Physician. Bertha E. Bush, Chicago.

A Review of the References to Oral Conditions in a Number of Standard Text-Books on Surgery. Arthur D. Black, Chicago.

The Surgical Principles of Harelip Operations. George V. I. Brown, Milwaukee.

A Study of the Repair of Cementum. M. H. Fletcher, Cincinnati.

Systemic Conditions in Relation to Oral Symptoms; Pain, Factor and Sepsis. Vida A. Latham, Chicago.

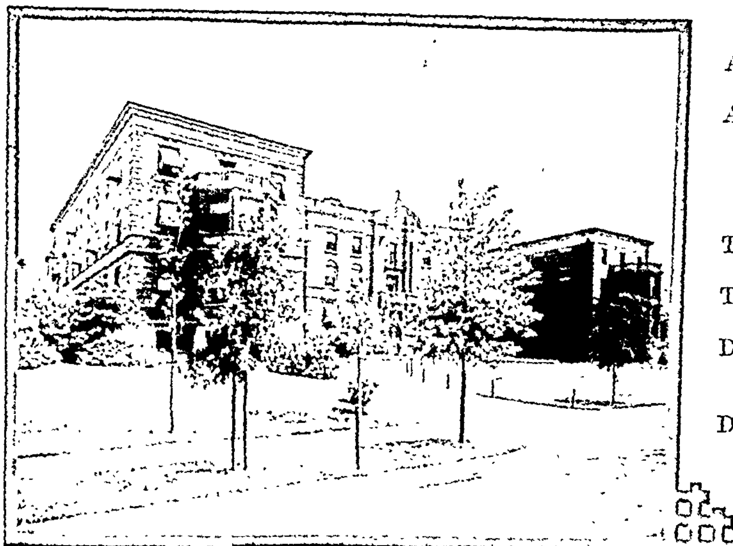


Fig. 22.—St. Luke's Hospital, Delmar Avenue and Belt.

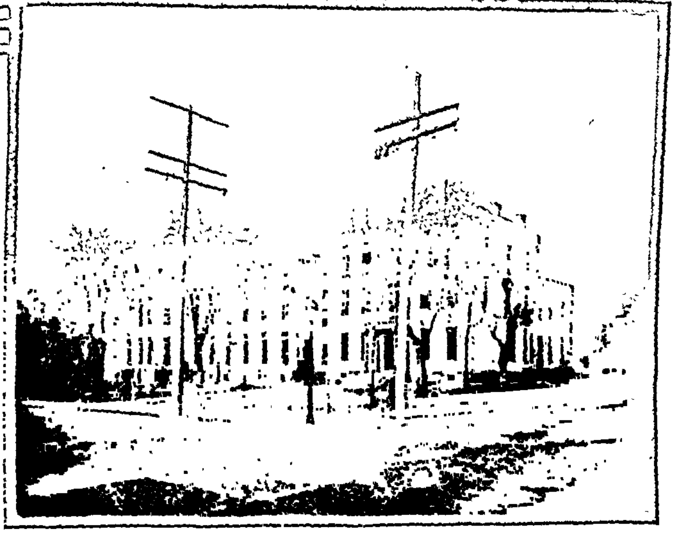


Fig. 23.—Hospital of the Missouri Pacific Railway, California and Eads Avenues.

SECTION ON DISEASES OF CHILDREN

Chairman, William J. Butler, Chicago; Secretary, Godfrey R. Pisek, New York

Chairman's Address: Enteroptosis in Children. William J. Butler, Chicago.

Agar-Agar in Constipation in Childhood. John Lovett Morse, Boston.

Diagnosis and Treatment of Chronic Intestinal Indigestion in Children. Samuel M. Hamill, Philadelphia.

Further Report of Cases with Complicating Ileocolitis and Probably Due to Acidosis. Thomas D. Parke, Birmingham, Ala.

Atypical Scarlet Fever. C. Gilmore Kerley, New York.

Infectious Diseases in Negro Children. H. M. Folkes, Biloxi, Miss.

Rachitis. J. W. Van Derslice, Chicago.

The Significance of Tuberculides in the Diagnosis of Tuberculosis in Infants. I. Rosenstern, Berlin.

A Clinical Study of a Case of Pseudoleucemic Anemia of Infancy. Theodore J. Elterich, Pittsburg, Pa.

A Case of Amaurotic Family Idiocy with Autopsy and Histologic Report. Isaac A. Abt, Chicago.

Some Cases of Edema in Infants. D. J. Milton Miller, Atlantic City, N. J.

Blood-Letting in Children. Heinrich Stern, New York.

Disturbances of Lactation. A. C. Cotton, Chicago.

Complemental Feeding of the Infant as an Effective Aid in Maintaining Maternal Nursing. Thos. S. Southworth, New York.

Feeding of Fats to Infants and Difficulties Encountered. Charles Douglas, Detroit.

The Digestion of Fat in Infancy. F. B. Talbot, Boston.

The Influence of Colloidal Protection on Milk. Jesse G. M. Bullowa and Jerome Alexander, New York.

Creatinin and Creatin Metabolism in Children. J. P. Sedgwick, Minneapolis.

Intracranial Surgical Lesions in Children. C. C. Rogers, Chicago.

Retarded Mental Development Due to Other than Cerebral Causes. Ernest Laplace, Philadelphia.

Surgical Treatment of Empyema. Samuel Lloyd, New York.

The Surgical Treatment of Congenital Pyloric Stenosis. A. D. Bevan, Chicago.

Surgical Mistakes on Infants and Children. Samuel W. Kelley, Cleveland.

Circumcision and Uncircumcision. R. B. Gilbert, Louisville, Ky.

Treatment of Some Colonic, Sigmoidal, Rectal and Anal Affections Common to Infancy and Childhood. S. G. Gant, New York.

A Study of the Anatomic Index in Children. Eli Long, Buffalo, N. Y.

A Clinical and Roentgenographic Study of the Essential Differences Between the Physical Findings in Childhood and Adult Life. Louis A. Levison and Harry Dachtler, Toledo, Ohio.

The School Child. W. C. Hollopeter, Philadelphia.

The Child's Sleep. J. Ross Snyder, Birmingham, Ala.

Dietary Studies of Undernourished School Children in New York. E. Mather Sill, New York.

Deintoxication of Atropin. Paul Fleischmann, Berlin.

The Pediatrist in Preventive Medicine. E. H. Bartley, Brooklyn.

Foibles in Specialism. C. F. Wahrer, Fort Madison, Iowa.

A Brief History of the Nebraska Epidemic of Poliomyelitis. H. M. McClanahan, Omaha, Neb.

The Prevention of Infant Mortality from an Educational Point of View. L. T. Royster, Norfolk, Va.

Subnormal Temperature in Infancy. H. W. Cheney, Chicago.

Orthostatic Albuminuria in Children. Louis Fischer, New York.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

Chairman, J. N. Hurty, Indianapolis; Secretary, Marshall Langton Price, Baltimore

Chairman's Address: J. N. Hurty, Indianapolis.

The Rôle of Pathology and Physiology in Preventive Medicine. Walter P. Bierring, Iowa City.

The Rôle of Pharmacy in Preventive Medicine. Joseph P. Remington, Philadelphia.

Oration on State Medicine and Hygiene. Seneca Egbert, Philadelphia.

The Rôle of Internal Medicine in Disease Preventive Work. D. L. Edsall, Philadelphia.

The Rôle of Ophthalmology in Preventive Medicine. Hiram Woods, Baltimore.

The Rôle of Pediatrics in Preventive Medicine. Thomas S. Southworth, New York.

Symposium on Hookworm, Pellagra and Typhoid Fever

Pellagra. John D. Long, Washington, D. C.

Sanitary Phases of the Hookworm Problem. Charles W. Stiles, Washington.

Hookworm Disease: The Farm; the next Point of Attack in Sanitary Progress. Allen W. Freeman, Richmond, Va.

Present-Day Problems and Progress in Prevention of Typhoid Fever. W. Forrest Dutton, Carnegie, Pa.

The Currents at the Eastern End of Lake Erie and the Head of Niagara River: Their Influence on the Sanitation of the City of Buffalo, N. Y. George Edward Fell, Buffalo, N. Y.

The Campaign Against Diphtheria, Scarlet Fever and Typhoid in Chicago. I. D. Rawlings, Chicago.

What Health Departments Can Do to Control Scarlet Fever. C. Hampson Jones, Baltimore.

The Relation of Alcoholism and Drug Addictions to Preventive Medicine. T. D. Crothers, Hartford, Conn.

The Rôle of Genito-Urinary Surgery in Preventive Medicine. W. T. Belfield, Chicago.

The Rôle of Surgery in Preventive Medicine. Miles F. Porter, Fort Wayne, Ind.

The Rôle of Obstetrics in Preventive Medicine. Walter P. Manton, Detroit.

Acute Epidemic Anterior Poliomyelitis. Hibbert W. Hill, Minneapolis.

The Rôle of Rhinology and Otology in Preventive Medicine. J. J. Kyle, Indiana.

Relation of Recruiting to Preventive Medicine. W. H. Rennie, Washington, D. C.

The Rôle of Neurology in Preventive Medicine. Joseph Collins, New York.

Legal Aspects of Domestic Quarantine. Henry Hemenway, Evanston, Ill.

The permanent Elimination of Yellow Fever from the Earth. J. H. White, New Orleans.

House Quarantine. Hyman Cohen, Chicago.

The Work of Prevention in Nebraska. D. T. Quigley, North Platte, Neb.

The Ventilation of School Buildings. W. A. Evans, Chicago.

Examination of School Pupils for Physical Defects. Heman Spalding, Chicago.

The Prevention of Infant Mortality. Gottfried Koehler and C. St. Clair Drake, Chicago.

Tuberculosis in the Raw Milk Supply of Chicago. T. O. Tonney, Chicago.

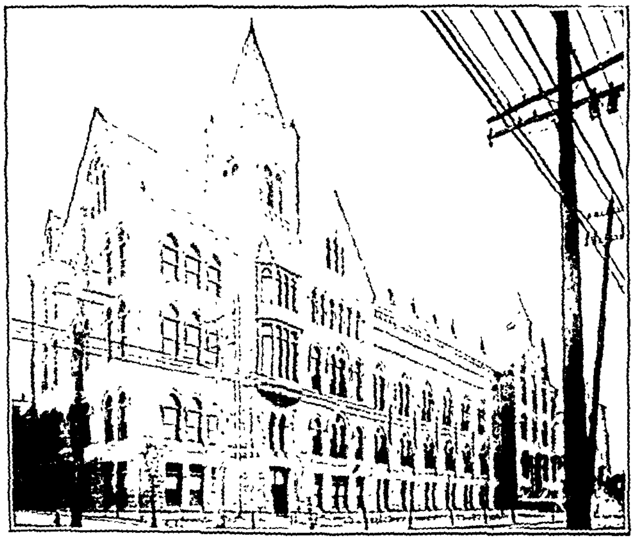


Fig 24.—The main building of the St. Louis University, Grand Avenue and Pine Street.

SECTION ON DERMATOLOGY

CHAIRMAN, GROVER W. WENDE, BUFFALO; SECRETARY, H. R. VARNEY, DETROIT

Chairman's Address: Dermatology in General Practice. Grover W. Wende, Buffalo.

Iodic Purpura. Report of Two Cases Caused by the Ingestion of Potassium Iodid. Frank Crozer Knowles, Philadelphia.

Pemphigus Foliaceus. Report of a Case. Alfred Schalek, Omaha.

Alopecia. Charles J. White, Boston.

The U. S. Pharmacopœia and the National Formulary in Dermatologic Practice. C. S. N. Hallberg, Chicago.

Anesthesia Dolorosa. Joseph Zeisler, Chicago.

Dermatitis Exfoliativa. William Frick, Kansas City, Mo.

Lichen Planus Atrophicus (Hallopeau.) Oliver S. Ormsby, Chicago.

A Report of Three Epidemics of Anomalous Scarlet Fever. William Thomas Corlett and Harold Newton Cole, Cleveland.

Symposium on Cancer

The Present Status of the Etiology of Malignant Growths of the Skin. Leo Loeb, Philadelphia.

Pathology of the Malignant Growths of Epithelial Tissue. J. A. Fordyce, New York.

Pathology of Malignant Diseases of Non-Epithelial Formation. F. B. Mallory, Boston.

Surgical Treatment of Cutaneous Malignant Growths. Joseph C. Bloodgood, Baltimore.

Treatment of Malignant Growths of the Skin from a Dermatologic Standpoint. William Allen Pusey, Chicago.

The Year's Progress in *Our Knowledge* of Syphilis. Howard Fox, New York.

Results of Experience with the Noguchi Modification of the Wassermann Serodiagnosis Test *for Syphilis*. James N. Hyde, Chicago.

Two Years' Experience with the Wassermann Reaction in Practice, Being a Preliminary Report on Fifty-seven Cases Treated from the Standpoint of the Wassermann Reaction. *B. C. Corbus, Chicago.*

Primula Dermatitis. O. H. Foerster, Milwaukee.

A Chronic Itching, Papular Eruption of the Axilla, Pubes and Breast. Marcus Haase, Memphis.

The Diagnosis of Leprosy. Isadore Dyer and Ralph Hopkins, New Orleans.

The Etiology of Verruca. Douglas W. Montgomery, San Francisco.

Hairy Tongue. M. L. Heidingsfeld, Cincinnati.

Granuloma Annulare. M. B. Hartzell, Philadelphia.

Lichen Nitidus. Richard L. Sutton, Kansas City, Mo.

SECTION ON OPHTHALMOLOGY

CHAIRMAN, W. C. POSEY, PHILADELPHIA; SECRETARY, A. E. BULSON, JR., FT. WAYNE, IND.

Chairman's Address. W. C. Posey, Philadelphia.

Question of Enucleation in Purulent Panophthalmitis, Together with Brief Experimental Study of the Subject. R. L. Randolph, Baltimore.

A Study of Transillumination. P. H. Fridenberg, New York.

The Radical Treatment of Lachrymonasal Disease by Rapid Dilatation and Allied Measures. S. L. Ziegler, Philadelphia.

Intermittent Closing of Retinal Arteries. Arnold Knapp, New York.

Report of the Committe on Collective Investigation Concerning the Ocular Muscles. Lucien Howe, Buffalo.

Report of the Committee on Tuberculosis. William H. Wilder, Chicago.

Tests of Visual Acuity and Cards for Subjective Correction of Ametropia. Edward Jackson, Denver.

Prescribing of Lenses for Close Work. Mark D. Stevenson and E. M. Weaver, Akron, Ohio.

Prevention of Blindness. F. Park Lewis, Buffalo.

Report of Two Cases of Choked Disc Due to Disease of the Accessory Sinuses of the Nose. C. A. Thigpen, Montgomery.

Present Status of the Etiology of Squint. W. Zentmayer, Philadelphia.

Post-Operative Treatment of Strabismus. A. E. Davis, New York.

Advancement Operation in Squint. V. H. Hulen, Houston.

Surgical Treatment of Separation of the Retina. C. A. Wood, Chicago.

Status of Serum and Vaccine Therapy in Ophthalmology. J. E. Weeks, New York City.

The Noguchi Reaction for Syphilis as an Aid to Diagnosis in Eye Lesions. Albert E. Bulson, Jr., Ft. Wayne, Ind.

Exhibition of new instruments and appliances.

Danger of Sympathetic Ophthalmia from the Use of the Cautery in Treating Iris-Prolapse; with Discussion of Other Methods of Treatment. H. Gifford, Omaha.

Ophthalmia Nodosa or Caterpillar-hair Ophthalmia, with Report of a Case. W. R. Parker, Detroit.

Spontaneous Rupture of the Eyeball—a Phenomenon of Glaucoma. E. C. Ellett, Memphis, Tenn.

Autointoxication and Allied Intestinal Troubles as a Possible Cause of Certain Vascular and Functional Disturbances. Hiram Woods, Baltimore.

Increasing Frequency of Inherited Syphilis and the Grave Importance of Its Early Recognition in Infants and Young Children, from the Standpoint of the Ophthalmologist. C. S. Bull, New York City.

Concerning the Ocular Palsies Associated with the Introduction of Various Solutions into the Spinal Cord for the Induction of Surgical Anesthesia. Wendell Reber, Philadelphia.

The Effect of Bright Light on the Eyes. J. Herbert Parsons, London.

Cataract-in-Capsule Extraction by a New Means and a New Method. G. C. Savage, Nashville, Tenn.

My Experience in the Operation for Cataract. J. L. Thompson, Indianapolis.

Filtering Cicatrix for Chronic Glaucoma, with Report of Cases Operated on by Method of LaGrange. Allen Greenwood, Boston.

Plastic Surgery of the Eyelids, Using the Wolfe Graft. F. P. Calhoun, Atlanta, Ga.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

CHAIRMAN, DAVID L. EDSALL, PHILADELPHIA; SECRETARY, MURRAY GALT MOTTER, WASHINGTON, D. C.

Chairman's Address: D. L. Edsall, Philadelphia.

Addresses of Delegates of the American Pharmaceutical Associates. Jos. P. Remington, Philadelphia, Chairman.

Reports of Standing Committees: Executive Committee, on Habit-Forming Drugs; H. C. Wood, Jr., Chairman. Committee on U. S. P.; Reid Hunt, Chairman. Committee on N. F.; R. A. Hatcher, Chairman.

Symposium on the Circulatory Disorders in Acute Infectious Diseases

Pathologic Physiology of the Circulatory Failure of Acute Infectious Disease. W. G. MacCallum, New York.

Treatment of the Circulatory Failure of Acute Infectious Diseases with Drugs Other Than Alcohol. George Dock, New Orleans.

The Physiologic Action, Uses and Abuses of Alcohol in the Circulatory Disturbance of Acute Infection. Joseph L. Miller, Chicago.

The Action of Alcohol on the Mammalian Heart. A. N. Richards, Chicago.

Extra-Pharmacal Methods in the Treatment of the Circulatory Failure of Acute Infections. W. S. Thayer, Baltimore.

Discussion to be opened by Joseph A. Capps, Chicago, and Arthur S. Loevenhart, Madison, Wis.

Symposium on Recent Advances in the Knowledge of Diabetes and Its Treatment

Joint Meeting with the Section on Pathology and Physiology. For Program, See That Section

Symposium on Extra-Pharmacal Methods

Limitations of the X-Ray. George C. Johnston, Pittsburg.

The Practical Uses of Electricity in Medicine. C. S. Potts, Philadelphia.

General Principles of Massage. Charles W. Barr, Philadelphia.

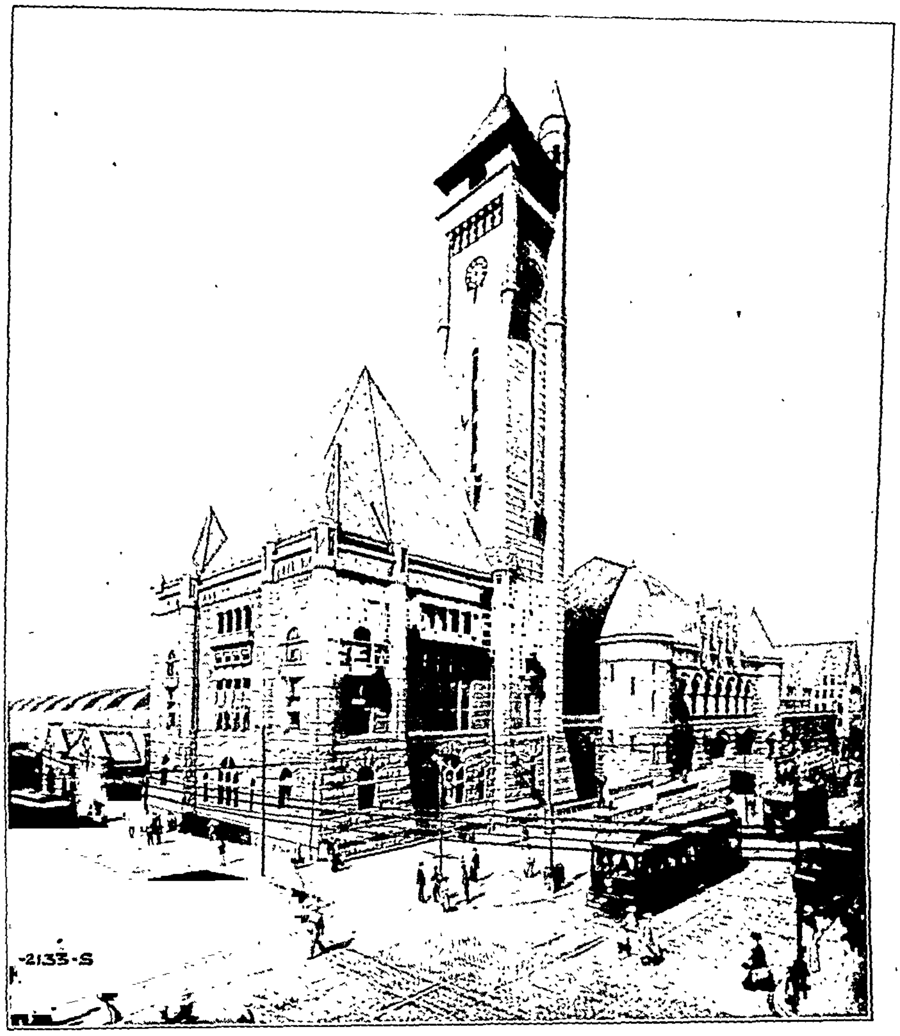


Fig. 25.—The Union Station, Market and Eighteenth Streets, one of the largest and finest union stations in this country. Twenty-four different railroads enter here, and thirty-two tracks are housed under one shed. All trains arrive at and depart from this station. On arrival members will find of service a complete Bureau of Information conducted by members of the St. Louis Medical Society.

The Principles of Hydrotherapy. Thomas McCrea, Baltimore.

Reeducation of the Will in Neurasthenics. D. J. McCarthy, Philadelphia.

Vasomotor Drugs. Reid Hunt, Washington.

The Practical Value of the Physiologic Standardization of Digitalis. Worth Hale, Washington.

The Clinical Use of Strophanthus. Robert A. Hatcher and Harold C. Bailey, New York.

Use and Abuse of Drugs in Circulatory Disorders. Samuel W. Lambert, New York.

The Treatment of Experimental Trypanosomiases. Joel J. Abel and Leonard G. Rowntree, Baltimore.

The Standardization of Antiseptics. John F. Anderson and Thomas B. McClintic, Washington.

Blood-Pressure in Tuberculosis. Haven Emerson, New York.

Vaccines in Typhoid Fever. James M. Anders, Philadelphia.

The Effect of Treatment on the Wassermann Reaction. Homer F. Swift, New York.

SECTION ON PATHOLOGY AND PHYSIOLOGY

CHAIRMAN, H. GIDEON WELLS, CHICAGO; SECRETARY, YANDELL HENDERSON, NEW HAVEN, CONN.

The Prognostic Significance of Pulse-Pressure Changes During Hemorrhage. Carl J. Wiggers, Ann Arbor, Mich.

The Functional Disturbances in Paroxysmal Tachycardia. Arthur D. Hirschfelder, Baltimore.

The Action of Adrenalin on the Mammalian Heart. Robert B. Gibson, Columbia, Mo.

The Crossed Action of Atropin and Chloroform on the Heart. William S. Carter, Galveston, Texas.

The Action of Alcohol on the Normal Intact Unanesthetized Animal. Clyde Brooks, Chicago.

Survival of Engrafted Blood-Vessels. C. C. Guthrie, Pittsburg, Pa.

The Inhibitory Effects of Magnesium Sulphate and the Nature of the Impulses in the Phrenic Nerves. Ida H. Hyde, Lawrence, Kan.

Gangrene Following Carbon Monoxid (Coal-Gas) Poisoning. Angus McLean, Detroit.

The Reaction of the Hemolymph nodes to Infection and Intoxication. A. S. Warthin, Ann Arbor, Mich.

Further Observations on the Hemolytic Test for Cancer and on the Behavor of Autodermic and Isodermic Skin Grafts in Operative Cases. George W. Crile, Cleveland, Ohio.

Diffuse Hypertrophy of the Mammary Glands of the Female. Henry Albert, Iowa City, Iowa.

The Pathogenesis of Cancer. Arthur E. Hertzler, Kansas City, Mo.

A Series of Spontaneous Tumors in Wild Rats. Paul G. Woolley and W. B. Wherry, Cincinnati.

The Use of Pure Lipoids and Alcoholic Extracts with Active and Inactive Serum in the Complement Fixation Tests

for Syphilis. Thomas MacRae, A. B. Eisenbrey and Homer F. Swift, New York.
A Study of Streptococci with the Complement Fixation and Conglutination Reactions. Homer F. Swift and William C. Thro, New York.
Pathology and Bacteriology of Anterior Poliomyelitis. H. E. Robertson, M.D., and A. J. Chesley, M.D., Minneapolis.
Classification of Appendicitis and the Relation of Chronic Appendicitis to Obliteration and Carcinoma (A Study of 5,000 Specimens Removed at Operation). William Carpenter MacCarty, Rochester, Minn.

Symposium on Recent Advances in Treatment of Diabetes

Metabolism in Diabetes. Graham Lusk, New York.
Various Forms of Experimental Diabetes and Their Significance for Diabetes Mellitus. J. J. R. MacLeod, Cleveland.
The Relation of the Pancreas to Diabetes. J. H. Pratt, Boston.
Acidosis. Silas P. Beebe, New York.
Therapy and Dietetics of Diabetes. George B. Wallace, New York.
Recent Clinical Advances in Diabetes. Thomas B. Futcher, Baltimore.
Congenital Cystic Kidney. F. R. Zeit, Chicago.
Electric Anesthesia and Electric Resuscitation After Heart-Failure Under Chloroform or Electrocution. Louis G. Rabinovitch, New York.
Influence of Alcohol on the Kidneys. J. F. Hultgen, Chicago.
Effects of Compression of Its Vessels on the Parenchyma of the Kidney. D. N. Eisendrath and D. C. Straus, Chicago.
Lymph Production in Edema. A. J. Carlson, Chicago.
The Influence of Diet on the Chyle. W. S. Hall, Chicago.
Further Studies on the Influence of Copious Water-drinking with Meals. P. B. Hawk, Urbana, Ill.
One of the Functions of the Duodenum. S. A. Matthews, Chicago.
The Action of Glycol Aldehyd and Glycerin Aldehyd in Diabetes and the Nature of Antiketogenesis. R. T. Woodyatt, Chicago.
The Effects of Different Anesthetics on the Course of Some Infections. John T. Halsey, New Orleans.
Recent Progress and Present Status of Experimental Research in Cancer. Leo Loeb, *Philadelphia.*
The Statistical Method in the Study of the Etiology of Cancer. Isaac Levin, New York.
The Relation of Heredity to Cancer. E. E. Tyzzer, Boston.
Immunity in Cancer. Harvey R. Gaylord, Buffalo.
The *Biochemical Investigation of Cancer* and its Diagnostic Applications. Richard Weil, New York.
Recent Progress in the Microscopic Anatomy and Differentiation of Cancer. F. B. Mallory, Boston.
Recent Progress in Surgical Treatment of Malignant Growths. J. C. Bloodgood, Baltimore.

Fig 26.—The music pavilion in Forest Park Highlands, where the members will be entertained Thursday night.

Fig. 27.—A view of a portion of Forest Park Highlands, one of the Metropolitan summer gardens. The Committee on Arrangements has arranged for the exclusive use of this resort for the members of the association and their guests on Thursday evening.

OFFICIAL CALL

The Sixty-First Annual Session of the American Medical Association, to be Held at St. Louis, June 7-10, 1910

The sixty-first annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 7, 8, 9 and 10, 1910, at St. Louis, Missouri.

The House of Delegates will convene at 10 a. m., Monday, June 6. In the House, the representation of the various constituent associations for the years 1910 to 1912, is as follows:

Alabama	3
Arizona	1
Arkansas	2
California	3
Colorado	2
Connecticut	2
Delaware	1
Dist. of Columbia	1
Florida	1
Georgia	2
Hawaii	1
Idaho	1
Illinois	9
Indiana	4
Iowa	3
Kansas	2
Kentucky	4
Louisiana	2
Maine	1
Maryland	2
Massachusetts	6
Michigan	3
Minnesota	2
Mississippi	2
Missouri	5
Montana	1
Nebraska	2
Nevada	1
New Hampshire	1
New Jersey	3
New Mexico	1
New York	11
North Carolina	2
North Dakota	1
Ohio	7
Oklahoma	2
Oregon	1
Pennsylvania	9
Philippine Island	1
Rhode Island	1
South Carolina	2
South Dakota	1
Tennessee	3
Texas	5
Utah	1
Vermont	1
Virginia	3
Washington	2
West Virginia	2
Wisconsin	3
Wyoming	1

The twelve scientific Sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy, and the United States Public Health and Marine-Hospital Service are entitled to one delegate each.

THE OPENING MEETING

The General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 7.

REGISTRATION

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 6, 7, 8 and 9, and from 9 to 10 a. m. on Friday, June 10.

William C. Gorgas, President.
George H. Simmons, General Secretary.

PERSONNEL OF HOUSE OF DELEGATES

Membership of the Legislative Body of the Association

A complete list of the members of the House of Delegates for the St. Louis session is impossible to give in this issue as a number of state societies are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover delegates and of the newly elected members who have been reported to The Journal up to the time of going to press:

STATE DELEGATES

ALABAMA

Mack Rogers, Birmingham.
W. H. Sanders, Montgomery.

ARKANSAS

E. Carson Hay, Hot Springs.

CALIFORNIA

H. Bert Ellis, Los Angeles
Granville MacGowan, Los Angeles.

COLORADO

Edward Jackson, Denver.
Hubert Work, Pueblo.

CONNECTICUT

D. Chester Brown, Danbury.

DELAWARE

James H. Wilson, Dover.

FLORIDA

J. Harris Pierpont, Pensacola.

ILLINOIS

Frank Billings, Chicago.
J. W. Pettit, Ottawa.
C. S. Bacon, Chicago.

INDIANA

W. N. Wishard, Indianapolis.
Edwin Walker, Evansville.
A. C. Kimberlin, Indianapolis.
C. H. McCully, Logansport.

IOWA

A. L. Wright, Carroll.

KANSAS

C. C. Goddard, Leavenworth
L. L. Uhls, Osawatomie.

KENTUCKY

[illegible]. W. Richmond, Clinton.
A. T. McCormack, Bowling Green.
B. F. Van Meter, Lexington.

LOUISIANA

E. Denegre Martin, New Orleans.

MAINE

Alfred D. Sawyer, Fort Fairfield.

MARYLAND

L. F. Barker, Baltimore.

MASSACHUSETTS

J. L. Morse, Boston.
R. P. M. Ames, Springfield.
C. E. Durant, Haverhill.
Horace D. Arnold, Boston.
Homer Gage, Worcester.
O. G. Brown, North Adams.

MICHIGAN

F. W. Robbins, Detroit.
S. C. Graves, Grand Rapids.
E. T. Abrams, Dollar Bay.

MINNESOTA

Arthur Sweeney, St. Paul.
C. F. McComb, Duluth.

MISSISSIPPI

J. W. Gray, Clarksdale.
D. W. Jones, Brookhaven.

MISSOURI

E. J. Goodwin, St. Louis.
W. B. Dorsett, St. Louis.

NEVADA

B. F. Cunningham, Reno.

NEW JERSEY

Luther M. Halsey, Williamstown. town.
C. R. P. Fisher, Bound Brook.
Alexander Marcy, Riverton.

NEW MEXICO

G. K. Angle, Silver City.

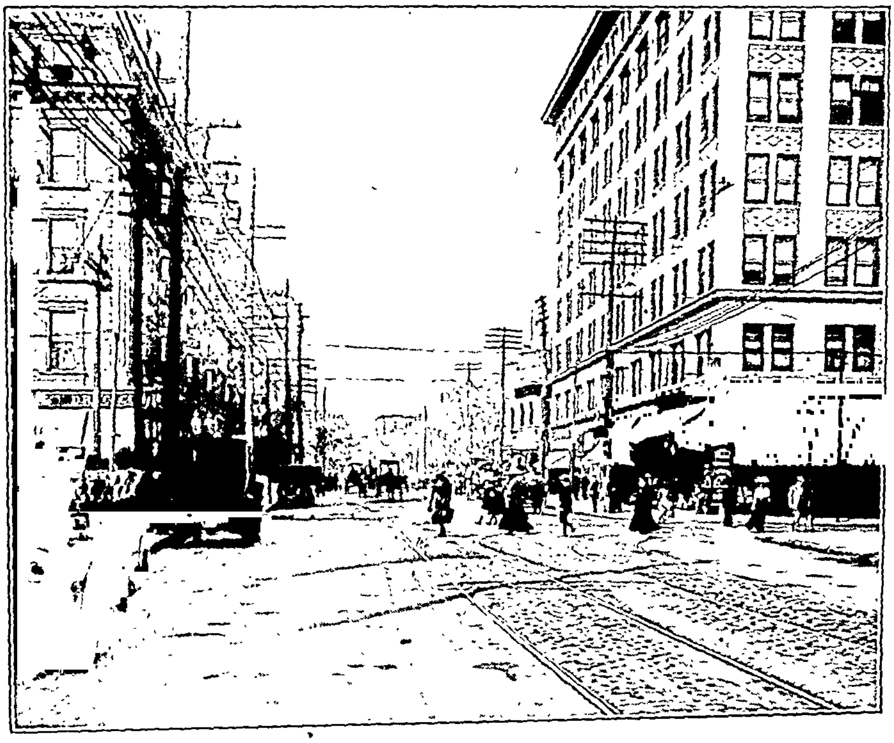


Fig. 28.—The corner of Grand and Olive looking north on Grand. This is one of the important corners during the session. On the right is the Metropolitan Building, headquarters of the Committee on Arrangements, where one hundred physicians have offices; in the distance, in the center, is the Young Men's Christian Association Building, where the Sections on Stomatology, Obstetrics and Diseases of Women and Pathology and Physiology meet. On the left is Beer's Hotel and the Humboldt Building, the latter occupied by physicians and dentists exclusively. The Third Baptist Church, where the Section on Practice of Medicine meets, is obscured by the trees on the right. The Presbyterian Church, where the Section on Diseases of Children meets, stands between Beer's Hotel and the Humboldt Building on the left. A block further north is the Congregational Church, where the Section on Pharmacology and Therapeutics meets.

NEW YORK

J. Riddle Goffe, New York City.
W. H. Thornton, Buffalo.
H. S. Houghton, New York City.
J. E. Weeks, New York City.
D. H. Murray, Syracuse.
A. T. Bristow, Brooklyn.
Charles Jewett, Brooklyn.
W. S. Ely, Rochester.
E. H. Bartley, Brooklyn.
H. L. Elsner, Syracuse.
J. E. Sadlier, Poughkeepsie.

NORTH CAROLINA

J. Howell Way, Waynesville.
A. J. Crowell, Charlotte.

NORTH DAKOTA

Victor H. Stickney, Dickinson.

OHIO

J. H. J. Upham, Columbus.
J. W. Clemmer, Columbus.
R. B. Hall, Cincinnati.

OKLAHOMA

L. A. Hahn, Guthrie.

OREGON

C. J. Smith, Pendleton.

PENNSYLVANIA

Thomas D. Davis, Pittsburg.
W. L. Estes, South Bethlehem.
F. W. Frankhauser, Reading.
Samuel Wolfe, Philadelphia.
Americus R. Allen, Carlisle.
Alexander R. Craig, Philadelphia.
G. W. Guthrie, Wilkesbarre.
John B. Lowman, Johnstown.
H. G. McCormick, Williamsport.

RHODE ISLAND

John Champlin, Westerly.

SOUTH DAKOTA

R. D. Alway, Aberdeen.

TENNESSEE

S. S. Crockett, Nashville.
L. A. Yarbrough, Covington.

TEXAS

E. H. Cary, Dallas.
William Brumby, Austin.
Frank Paschal, San Antonio.

UTAH

Augustus C. Beahle, Salt Lake City.

VIRGINIA

J. Shelton Horsley, Richmond.
T. C. Firebaugh, Harrisonburg.
W. E. Anderson, Farmville.

WASHINGTON

J. R. Yocum, Tacoma.
Wilson Johnston, Spokane.

WEST VIRGINIA

C. S. Hoffman, Keyser.
C. A. Wingerter, Wheeling.

WISCONSIN

Carl Doege, Marshfield.
C. A. Richards, Rhinelander.
L. F. Bennett, Beloit.

WYOMING

J. J. Monahan, Encampment.

SECTION DELEGATES

PRACTICE OF MEDICINE

Joseph Capps, Chicago.

OBSTETRICS AND DISEASES OF WOMEN

H. G. Wetherill, Denver.

SURGERY

E. H. Ochsner, Chicago.

OPHTHALMOLOGY

T. A. Woodruff, Chicago.

LARYNGOLOGY AND OTOLOGY

D. B. Kyle, Philadelphia.

PREVENTIVE MEDICINE AND PUBLIC HEALTH

J. H. White, New Orleans.

NERVOUS AND MENTAL DISEASES

M. Allen Starr, New York.

STOMATOLOGY

George V. I. Brown, Milwaukee.

DISEASES OF CHILDREN

C. Douglas, Detroit.

DERMATOLOGY

W. A. Pusey, Chicago.

PHARMACOLOGY AND THERAPEUTICS

C. S. N. Hallberg, Chicago.

PATHOLOGY AND PHYSIOLOGY

W. B. Cannon, Boston.

U. S. ARMY

M. W. Ireland, Washington, D. C.

UNITED STATES PUBLIC HEALTH AND MARINE HOSPITAL SERVICE

G. B. Young, Chicago.

REGISTRATION

Importance of Registering Early

The Registration Department will be in the Coliseum. It will be necessary for a member of the Association to register in order to obtain the official badge and program. No one will be admitted to any entertainment without a badge. Members are urged to register as soon as they can name their hotels.

The Registration Department will be open from 8:30 a. m. to 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 6, 7, 8 and 9, and from 9 to 10 a. m. on Friday, June 10.

Attention is called to the following directions:

1. Each physician desiring to register will first fill out a registration card. One should write very plainly, or print with letters, as the cards are given to the printer to use as "copy" for putting the names in the daily *Bulletin*.

2. *Each member who has paid his annual dues in full will* present his pocket card (which was sent him from the Chicago office) and his filled-out registration card at a window marked "Registration by Pocket Card."

3. *The registration of members who have paid their dues, but who have failed to bring their pocket cards,* will be delayed, while the records are consulted. Hence, be sure to bring your "pocket card."

4. *Members who have not paid* their dues will present registration card and make payment at a window marked "Cash."

5. *Each applicant for membership will present his registration card* at the window marked "New Members," with a certificate of membership in his state society. Prospective members, however, will save delay and annoyance by sending in their applications before the session. All such applications should be mailed to the American Medical Association, 535 Dearborn Avenue, Chicago, so as to arrive not later than May 25.

6. Each member *on* registration will receive a badge, a copy of the Official Program, containing the *full details of the scientific* proceedings, invitations to the social functions, and such other announcements as may be necessary.

THE PROGRAM OF CLINICS

Special Clinics for the Benefit of Physicians at St. Louis Session

During the week preceding and the week following the session of the American Medical Association, the medical departments of the St. Louis University and Washington University have arranged series of clinics at the various hospitals and medical schools for the benefit of physicians, who will thus have opportunity to take advantage of the instruction afforded by *the clinics* during their visit. The Committee on Arrangements will have full *programs*, with location of hospitals and clinics, and the way to reach them, ready for distribution at the time of the session. The clinics will begin May 30. The *schedule of lectures* and clinics of St. Louis University follows:

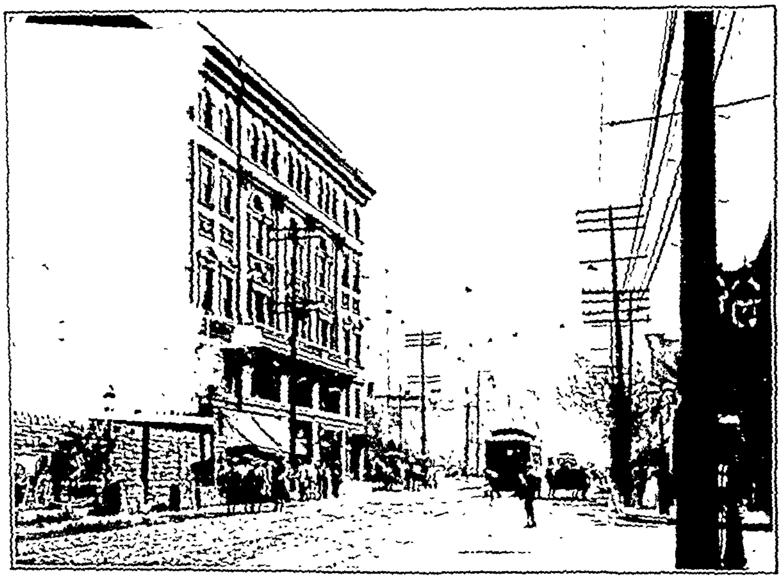


Fig. 29.—Another important street corner during the session, Grand and Finney Avenues looking south on Grand. The large building on the left is the Odeon Theater, in which will meet the *Section* on Surgery and the Section on Dermatology; here *also* will be held the *general* meeting Tuesday morning. In the center of the picture over the first street car is the Y. M. C. A. Building, where will meet the Section on Obstetrics and Diseases of Women, the Section on Stomatology and the Section on Pathology and Physiology. Beyond the Y. M. C. A. Building is the Third Baptist Church, where the Section on Practice of Medicine will meet. A comparison of this picture with that on the *opposite page and with the map of St. Louis a few* pages further on will show how near the meeting places of the various sections are to *one another.*

MONDAYS, MAY 30 AND JUNE 13

Children's Diseases and Infant Feeding, by Profs. J. R. Clemens and J. M. Brady, St. Ann's Foundling Asylum, from 9 to 12 a. m. Clinics at City Hospital, to be arranged from 2 to 5 p. m.

TUESDAYS, MAY 31 AND JUNE 14

Medical *Clinic*, by *Prof. W. G. Moore* and Assistant Prof. William Engelbach, at St. John's *Hospital, from* 9 *a. m.* to 12 *m.* Surgical Clinic, by Prof. John Young Brown and Dr. F. W. Bailey, at St. John's Hospital, from 9 a. m. to 12 m.
Ear, Nose and Throat Clinic, by Prof. H. W. Loeb, and X-Ray Clinic, by Assistant Prof. R. D. Carman, at St. John's Hospital, from 2 to 5 p. m.

WEDNESDAYS, JUNE 1 AND 15

Ophthalmology, by Prof. Carl Barck; Medicine, by Prof. G. C. Crandall and Assistant Prof. W. P. Elmer; Surgery, by Prof. C. M. Nicholson, Drs. H. Talbott and J. T. Axline; Pathologic *Demonstrations, by Prof* R. L. Thompson, at Rebekah Hospital, from 8 to 12 a. m.
Eye, Ear, Nose and *Throat*, by *Prof.* Max A. Goldstein; Skin, by Prof. F. M. Englan and *Dr.* W. H. Mook; Eye, by Prof. Adolph Alt; Genito-Urinary, by *Prof.* Bransford Lewis and Dr. E. E. Kurtzeborn, at College Dispensary, from 2 to 5 p. m.

THURSDAYS, JUNE 2 AND 16

Clinics same as Tuesdays.

FRIDAYS, JUNE 3 AND 17

Clinics same as Wednesdays.

SATURDAYS, JUNE 4 AND 18

Surgical Clinic, by Dr. John McHale Dean and Dr. Louis Rassieur, at St. Mary's *Hospital, from* 9 a. m. *to* 12 *m.*

Orthopedic Clinic, by Dr. Archer O'Reilly; *Gynecological Clinic,* by Prof. Walter B. Dorsett and Dr. W. C. Gayler, at Rebekah Hospital, from 9 a. m. to 12 m.
Nervous Diseases, by Prof. C. G. Chaddock, at the Sanitarium, from 9 a. m. to 12 m.
Neurology, by Assistant Prof. William W. Graves, at Alexian Brothers Hospital, from 2 to 5 p. m.
Syphilology, by Assistant *Prof. J.* W. Marchildon, at Alexian Brothers Hospital, from 2 to 5 p. m.

Further clinics will probably be arranged. Those interested in nervous diseases are invited to the Alexian Brothers Hospital daily from 2 to 5 p. m. during the meeting. The clinic will be in charge of Prof. W. W. Graves. A few physicians interested in gynecology may attend daily at the Jewish Hospital Dispensary from 11 a. m. to 1 p. m. The clinic will be in charge of Assistant Prof. Hugo Ehrenfest.

Washington University clinics are given on page 1539.

PROGRAM OF ENTERTAINMENTS

(The official members' badge, or one of those provided for ladies and guests, will be required for admission.)

For the Ladies

Tuesday: A trip has been arranged to University City, as the guests of Mr. E. J. Lewis, to visit his printing establishment and the other enterprises in which he is interested. Mr. Lewis says that he will arrange to transport the ladies to and from University City, and to entertain them with refreshments. A trip has also been planned to the Anheuser-Busch Brewery. A reception will be held at the Woman's Club and one at the English building at Washington University under the auspices of the university.

Wednesday: There will be a steamboat excursion to Jefferson Barracks at 3 in the *afternoon, returning* at 6 o'clock.

Thursday: There will be a general entertainment with music and *refreshments* at Shaw's Garden.

For the Members and Guests

Tuesday Night: The various alumni banquets and reunions and the section dinners and smokers.

Wednesday Night: The President's reception.

Thursday Night: The large general entertainment for everybody at Forest Park Highlands.

At the last-named entertainment, the Association will have the exclusive use of this popular amusement park for that evening, and refreshments, cigars, entrance to the theater, etc., will be free. The concessions in the garden, however, will, of course, make their usual charges for entrance.

THE ST. LOUIS HOTELS

Rates, Locations and Capacities of Hotels—Important to Reserve Early

Members of the American Medical Association desiring to secure hotel accommodations should write to the chairman of the Hotels Committee, Dr. Louis H. Behrens, 609 Metropolitan Building, or direct to the hotels. Many reservations have already been made and prompt attention should be given to this matter in order to secure accommodations in advance.

PARTICULARS SHOULD BE GIVEN

When writing, please give definite instructions as to the character of rooms desired, whether with or without bath, European or American plan, number of people in the party, and particularly the names of persons who are willing to share rooms.

As the section meeting places are located along Grand avenue, which is a thoroughfare about midway between the east and west ends of the city, the hotels are listed according to their location, and the time consumed in riding to the meeting-places is mentioned.

A glance at the accompanying map of St. Louis will make the relationships of these districts clear. There is excellent street-car service.

DOWN-TOWN HOTELS

The first list comprises those hotels located in the downtown, or east, section of the city:

American Hotel, Seventh and Market Sts., 275 rooms, all with bath; can take 350; rate, one person, $1.50 and up; additional, $1 per person; 15 minutes from meeting place.

Edison Hotel, 107 N. Eighth St., 12 rooms; can take 24; rate, one person, $1; additional, $1 per person; 15 minutes from meeting place.

Hotel Garni, Jefferson and Olive St., 50 rooms; can take 50; rate, one person, $0.75 and up; additional, $0.50 per person; 8 minutes from meeting place; near Coliseum.

Jefferson Hotel, Twelfth and Locust Sts., 400 rooms; can take 300; rate, one person, $1.50 and up; with bath, $2.50 and up; additional, $1 per person; with bath, $1.50 per person; 8 minutes from meeting place.

Laclede Hotel, Sixth and Chestnut Sts., 170 rooms; can take 150; rate, one person, $1 and $1.50; with bath, $2 to $2.50; additional, $1 per person; 15 minutes from meeting place.

Madison Hotel, Broadway and Chestnut St., 112 rooms; can take 100; rate, one person, $1 and up; additional, $0.75 and up; 15 minutes from meeting place.

Marquette Hotel, Eighteenth and Washington Ave., 400 rooms; can take 250; rate, one person, $1.50 and up; with bath, $2 and up; additional, $1 per person; 8 minutes from meeting place.

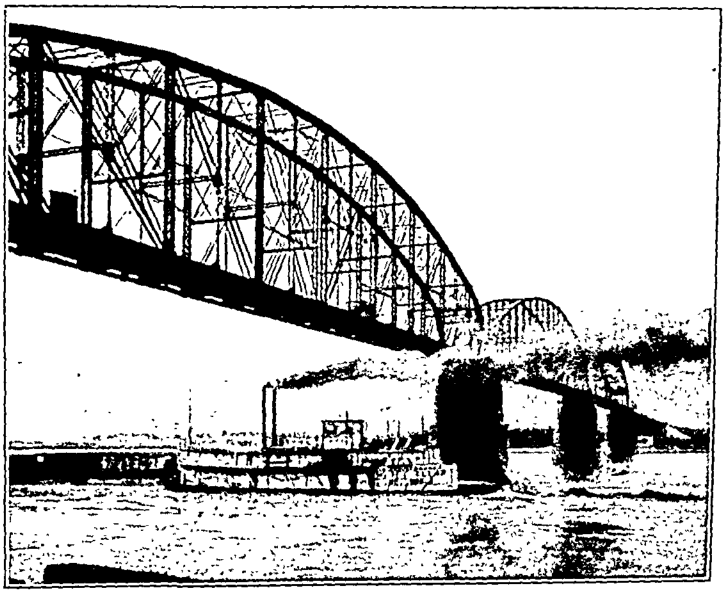


Fig. 30.—The Merchants' Bridge, one of the two handsome bridges joining Missouri and Illinois.

Maryland Hotel, Ninth and Pine Sts., 240 rooms; can take 200; rate, one person, $1 to $2; with bath, $2 to $2.50; additional, $1 per person; 10 minutes from meeting place.

Moser Hotel, 809 Pine St., 100 rooms; can take 75; rate, one person, $0.75 and $1; additional, $0.75 per person; 10 minutes from meeting place.

Planters Hotel, Fourth and Pine Sts., 440 rooms; can take 300; rate, one person, $1.50 and up; with bath, $2.50 and up; additional, $1 per person; with bath, $1.50 per person; 15 minutes from meeting place.

Portland Hotel, 1817 Market St., 100 rooms; can take 100; rate, one person, $1; additional, $0.75 per person; 10 minutes from meeting place.

Rozier Hotel, Thirteenth and Olive Sts., 120 rooms; can take 180; rate, one person, $0.75 to $1.50; additional, $0.75 per person; 8 minutes from meeting place.

St. James Hotel, Broadway and Walnut, 150 rooms; can take 200; rate, one person, $1.50; with bath, $2; additional, $1 per person; with bath, $1.50 per person; 15 minutes from meeting place.

St. Nicholas Hotel, Broadway and Market, 40 rooms; can take 25; rate, one person, $0.75 to $1; additional $0.50 per person; 15 minutes from meeting place.

Southern Hotel (General Headquarters), Broadway and Walnut, 400 rooms; can take 200; rate, European plan, one person, $1.50 and up; with bath, $2.50 and up; American plan, one person, $3.50 and up; with bath, $4 and up; additional, European plan, $1.50 and up per person; American plan, $3.50 and up per person; 15 minutes from meeting place.

Stratford Hotel, Seventh and Pine Sts., 100 rooms; can take 150; rate, one person, $1; with bath, $1.50; additional, $0.50 per person; 15 minutes from meeting place.

Terminal Hotel, Union Station, 110 rooms; can take 150; rate one person, $1.25 and up; with bath, $2.50 and up; additional, $1.25 per person; 10 minutes from meeting place.

SECTION DISTRICT HOTELS

The following hotels are located in the west end, or residence section, of the city:

Beers Hotel, Grand and Olive, can take 40; rate, one person, $1 and up; with bath, $2.50, and up; additional, $1 per person; at meeting place.

Buckingham Hotel, Kingshighway and West Pine, can take 100; rate, one person, European plan $1.50; with bath, $2.50; additional, $1 per person; rate, one person, American plan $3; with bath, $4; additional, $2.50 per person; 10 minutes from meeting place.

Hamilton Hotel, Hamilton and Maple Ave., 150 rooms; can take 50; European plan, rate, one person, $1; with bath, $1.50; additional, $1 per person; American plan, one person, $2; with bath, $2.50; additional, $1.50; 15 minutes from meeting place.

Hotel Berlin, Berlin and Taylor Ave., can take 25; American plan, rate, one person, $1.50; with bath, $2.50; additional, $1 per person; 10 minutes from meeting place.

Usona Hotel, Kingshighway and McPherson, 100 rooms; can take 50; American plan, rate, one person, $2.50; with bath, $3; additional, $1.50 per person; with bath, $2 per person; 10 minutes from meeting place.

West End Hotel, Vandeventer and W. Belle, can take 25; rate, one person, $1 and up; with bath, $1.50 and up; additional, $1 and up; 5 minutes from meeting place.

Westmoreland Hotel, Maryland and Newstead Ave., can take 50; all rooms with bath; rate, one person $2; additional, $1 per person; 8 minutes from meeting place.

Windermere Hotel, 5601 Delmar Blvd., American plan only; can take 25; rate, one person, $1.50; with bath, $2.50; additional, $1 per person; 15 minutes from meeting place.

PRIVATE HOMES AND BOARDING HOUSES

In addition to the hotels listed there are numerous private homes and boarding-houses on and near Grand avenue, in close proximity to the section meeting-places, where good accommodations can be secured at rates ranging from 75 cents to $1.50 a day, American plan. Those who desire to obtain such accommodations should write to the chairman, Hotels Committee, at the address given above. State clearly what accommodations are desired, for how many people, and at what rate per day.

The committee announces that all members will be well taken care of, but those who have special preferences should apply at once.

Section Hotel Headquarters

Hotel headquarters have been assigned as follows:

General Headquarters .... Southern Hotel

SECTIONS	HOTELS
Surgery	Jefferson Hotel
Dermatology	Jefferson Hotel
Laryngology and Otology	Jefferson Hotel
Practice of Medicine	Planters Hotel
Pathology	Planters Hotel
Pharmacology and Therapeutics	Planters Hotel
Ophthalmology	Marquette Hotel
Obstetrics and Diseases of Women	Marquette Hotel
Diseases of Children	Marquette Hotel
Nervous and Mental Diseases	Buckingham Hotel
Preventive Medicine	Buckingham Hotel
Stomatology	West End Hotel

SECTION MEETING PLACES

Compact and Convenient Grouping of Section Halls

The St. Louis Committee on Arrangements announces that it has located the section meeting-places on Grand avenue and on streets intersecting Grand avenue. Those meeting-places located on intersecting streets are not more than 300 feet distant from Grand avenue. The distance between the extremes of the district is about one-half mile, but all are in close proximity to other halls, and special attention was given to grouping correlated sections.

The only hall that is not in the Grand avenue district is the Coliseum, where the Registration Bureau, the Commercial and Scientific Exhibits, the Postoffice, etc., will be located. No hall in the vicinity of the meeting-places was large enough to accommodate these departments.

The street car facilities are most excellent, cars running at two and three minute intervals, and arrangements are being made for special service on occasions when the members will travel in large bodies at any particular hour. Taxicabs will also be at hand, and a special rate will be allowed for transporting the members from the Coliseum, where the Registration Bureau will be established, to the Grand avenue district.

The section and other meeting places are as follows:

General Session: Odeon Theatre, Grand and Finney Aves.
House of Delegates: St. Louis Medical Society, 3524 Pine St.
Scientific and Commercial Exhibits, Postoffice, Registration Office: Coliseum, Washington and Jefferson.
President's Reception: First Regiment Armory, Grand and Manchester Aves.
Medicine: Third Baptist Church, Grand and Washington Aves.
Surgery: Odeon Theatre, Grand and Finney Aves.
Obstetrics and Diseases of Women: Y. M. C. A. Building—Association Hall, Grand and Franklin Aves.
Laryngology and Otology: Sodality Hall, Grand Ave., between Pine and Laclede.
Ophthalmology: Aschenbroedel Hall, 3535 Pine St.
Diseases of Children: Grand Avenue Presbyterian Church, Sunday School Room, Grand and Washington Aves.
Pharmacology and Therapeutics: Delmar Avenue Congregational Church, Delmar, west of Grand Ave.
Stomatology: Y. M. C. A. Building—Small Hall, Grand and Franklin Aves.
Nervous and Mental Diseases: St. Louis University Library, Grand Ave., head of East Pine.
Dermatology: Odeon Bldg—Recital Hall, Grand and Finney Aves.
Preventive Medicine and Public Health: Knights of Columbus Bldg., 3549 Olive St
Pathology and Physiology: Y. M. C. A. Building—Lecture Hall, Grand and Franklin.

EQUIPMENT OF SECTION HALLS

The Committee on Section Meeting Places will endeavor to have all halls fully equipped with every needed appurtenance to facilitate the transaction of the work of the sections. Communications on this subject should be addressed to Dr. H. Tuholske, Chairman of the Committee on Section Meeting Places, 609 Metropolitan Building, St. Louis.

RAILROAD RATES

Reduced Railroad Rates to St. Louis Secured and Special Trains Arranged

The Committee on Transportation and Place of Session submits the following report concerning railroad rates and trains.

The Central Passenger Association and the Western Passenger Association, which include all railway lines operating in the states of Ohio, Michigan, Indiana, Illinois, Iowa, Wisconsin, Minnesota, North and South Dakota and Missouri, will make a rate of one fare and a half for the round trip, tickets to be sold June 4 to 8, inclusive. The return limit is June 20, with provision for extension of the limit to July 20 if ticket is deposited with joint agent at St. Louis and deposit fee of $1 paid by the passenger.

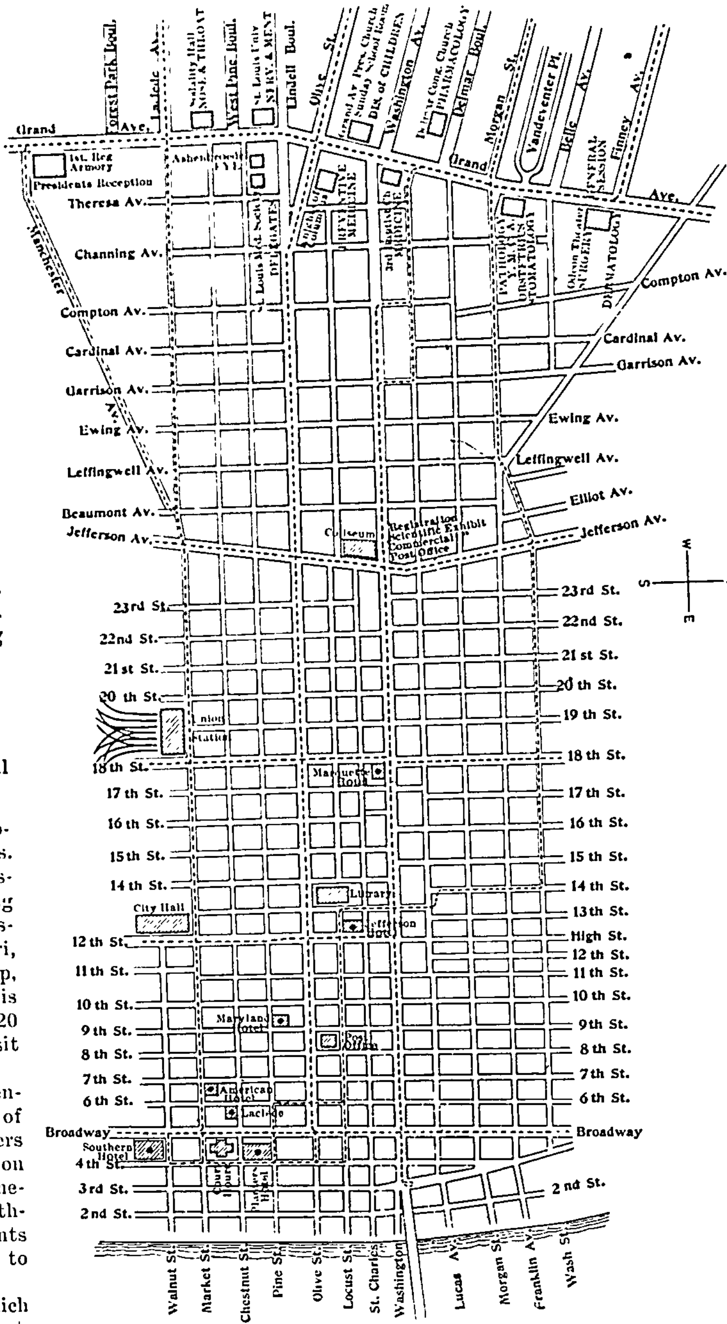
Information has been received from the Southeastern Passenger Association, whose territory embraces states south of the Ohio and the Potomac and east of the Mississippi rivers that a fare of one and one-half cents a mile in each direction will be granted, which is practically a rate of one and one-half fares, the same as the other territories. The Southwestern Passenger Association has granted a rate of two cents a mile in each direction from all points in this territory to the eastern gateways.

The Trunk Line and New England associations, which include all lines operating in the states of Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, West Virginia, Delaware, Maryland and the District of Columbia, have authorized a round-trip rate of one fare and a half, tickets to be sold June 3 to 6, inclusive. The return limit is June 20, with provision for extension to July 20 by deposit of ticket and payment of deposit fee of $1.

The Trans-Continental Association has authorized a one-fare rate of $67.50 from all California points, tickets on sale June 3, 4 and 5; the return limit is three months. The same rate is to apply from North Pacific coast points in Oregon and Washington, tickets to be on sale June 2 only; the return limit is three months from date of sale.

In the trans-Missouri territory, which covers the states of Kansas, Colorado, Nebraska, Utah, Wyoming, North Dakota and South Dakota west of Missouri river, the regular tourist rates to Missouri river stations added to one and one-half fare rates from such stations to St. Louis and return will be in force.

Considering the territory covered, these are the best rates which the Association has had since the two-cent laws went into effect.



Map of a portion of St. Louis, showing the General Headquarters, the Registration building, the section meeting places, the section hotel headquarters, etc., as explained in the descriptions on the accompanying pages

Special Trains

The following special trains have been arranged:

A day train over the Chicago and Alton road will leave Chicago Monday, June 6 at 9 a. m., arriving at St. Louis about 5 p. m., in ample time for members to get located in their hotels for the night.

This train will be composed of reclining chair cars for those who do not wish to patronize the Pullman parlor cars, a library club car with buffet, dining car, Pullman parlor cars and observation car. This train will provide a beautiful ride through the state by daylight.

A night special will leave Chicago over the Chicago and Alton road at 11:30 p. m., arriving at St. Louis about 8 a. m. This train will consist of reclining chair cars (if desired) without extra charge, club cars with buffet and Pullman drawing-room sleeping cars.

These special trains from Chicago will stop at Joliet, Dwight, Pontiac, Chenoa, Bloomington, Atlanta, Lincoln, Springfield, Carlinville and Alton to pick up members and will make any other intermediate stops if previous notification is given that members wish to board the trains.

For the special trains from Chicago to St. Louis over the Chicago and Alton railroad reservations may now be made of C. R. Davidson, assistant general passenger agent, Rector Bldg., Monroe and Clark streets, Chicago.

Members may leave Peoria at 12:20 p. m. on the Chicago and Alton, connecting with the special at Springfield.

Special trains will leave Kansas City over the Chicago and Alton road on Monday, June 6, at 9 a. m. and 11:30 p. m., the former making a day run through Missouri, arriving at St. Louis at 5 p. m., and the latter a night run, arriving at St. Louis at 8 a. m. In their makeup these trains will be the counterpart of the trains between Chicago and St. Louis and will stop at the following Missouri stations: Independence, Odessa, Higginsville, Marshall, Slater, Glasgow, Higbee, Centralia and Mexico and at intermediate points if previous notification is given that members wish to join the trains.

For the special trains from Kansas City, reservations may be made of W. H. Abel, assistant general passenger agent, Junction Ticket Office, Ninth and Main Sts., Kansas City Mo.

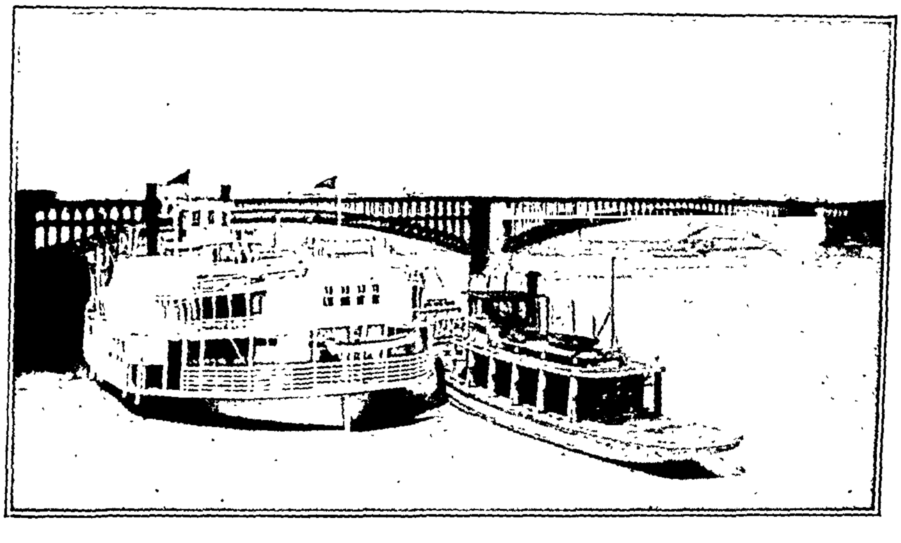


Fig. 31.—View of the Eads bridge across the Mississippi River.

From Minneapolis and St. Paul a special train will be run over the Chicago, Milwaukee and St. Paul road to Chicago, and from Chicago to St. Louis over the Chicago and Alton.

A special train, or special drawing-room sleepers set aside for the exclusive use of members, will be run over the Toledo, St. Louis and Western (Clover Leaf line) leaving Toledo, Ohio, at 7:15 p. m. and arriving at St. Louis at 8 o'clock in the morning. This train will stop at Continental, Delphos and Ohio City, Ohio, and Decatur, Marion, Kokomo, Frankfort and Veedersburg, Ind., and Charleston, Ill. Stops will be made at other points if previous notification be given that members wish to take the train.

For the special train from Toledo, Ohio, application should be sent to E. L. Browne, district passenger agent, Clover Leaf Route, Toledo, Ohio.

A special train, or cars as may be needed, has been arranged to run over the New York Central system, including the Boston and Albany from Boston. This train, which will stop at prominent intermediate points, will leave Boston and New York in time to reach St. Louis early Tuesday morning, June 7.

For reservations over the New York Central lines from New York and the east, apply to L. F. Vosburgh, general eastern passenger agent, 1216 Broadway, New York.

For reservations over the Boston and Albany from Boston apply to A. S. Hanson, Boston.

Reservations should be made as early as possible in order that all may be accommodated.

Arrangements have been made so that through tickets over the New York Central lines from Cleveland and all points east thereof may be exchanged in St. Louis at the city office of the Chicago and Alton for return trip by way of Chicago over the Chicago and Alton line, with stopover at Chicago. Likewise, tickets reading "by way of Chicago and Chicago and Alton" may be exchanged for return trip by direct route over New York Central lines.

Rates from Various Cities

The following round trip fares from principal cities are made on the basis of the rates described above and will assist in computing the expense of travel from the various parts of the United States. Some cities are given in capitals to indicate, as stated above, that from those cities special through trains will be run for the exclusive use of members of the American Medical Association en route to St. Louis.

Baltimore	$31.50
Bloomington	4.95
Boston—	
via Standard Lines	39.40
via Buffalo & Differential Lines	37.80
via B. & M. and West Shore	36.85
via B. & M., D. & H. and Erie	34.50
via Montreal	33.00
Buffalo, N. Y.—	
via Lake Shore or Mich. Central	25.15
via Wab., G. T., N. Y., C. & St. L., Erie	22.90
CHICAGO.	8.70
Cleveland, Ohio.	18.75
Denver.	34.00
Des Moines, Iowa.	11.70
Detroit.	16.95
via Grand Trunk.	16.20
Ft. Dodge, Iowa.	14.25
Gr. Rapids, Mich.	14.05
KANSAS CITY, Mo.	10.00
Madison, Wis.	11.10
Marshalltown, Ia.	11.70
Milwaukee, Wis.	11.25
MINNEAPOLIS	17.65
Montreal, Que.	35.70
New York City—	
via Standard Lines	36.40
via Differential Lines.	31.90
Omaha	15.40
Oskaloosa, Iowa.	9.75
PEORIA, ILL.	5.10
Philadelphia	31.90
Pittsburg, Pa.—	
via Pa. Lines.	21.00
via B. & O. and W. & L. E.	19.50
via Holgate	18.75
via Ft. Wayne Route and Chicago	24.45
via B. & O., P. & L. E. or Pan Handle and Chicago.	22.95
via W. & L. E. and Chicago	22.20
Salt Lake City	64.00
San Francisco	67.50
Seattle.	67.50
Sioux City, Iowa	17.55
ST. PAUL, MINN.	17.65
TOLEDO, OHIO.	15.00
Toronto, Ont.	24.60
Washington, D. C.	31.50

M. L. Harris, Chairman.
Committee on Transportation and Place of Session.

ST. LOUIS COMMITTEES

LOCAL COMMITTEE ON ARRANGEMENTS

EXECUTIVE COMMITTEE

Walter B. Dorsett, Chairman
E. J. Goodwin, Secretary
J. H. Amerland, Treasurer
Frank J. Lutz
Henry Schwarz

CHAIRMEN OF SUBCOMMITTEES

Committee on Finance	Warren B. Outten
Committee on Halls	M. B. Clopton
Committee on Hotels	Louis H. Behrens
Committee on Commercial Exhibits	E. Lee Dorsett
Committee on Scientific Exhibit	F. J. Lutz
Committee on Printing	Philip Skrainka
Committee on Program	Joseph Grindon
Committee on Reception	C. M. Nicholson
Committee on Bureau of Information	Emmett P. North
Committee on Section Meeting Places	H. Tuholske
Committee on Badges	W. E. Sauer
Committee on Entertainments	H. G. Mudd
Committee on Section Entertainments	W. W. Graves
Committee on Alumni Entertainments	Nathaniel Allison
Committee on Registration of St. Louis Members	Arthur C. Kimball

THE SCIENTIFIC EXHIBIT

A Display of Unusual Interest in Prospect at St. Louis

The Scientific Exhibit at St. Louis will be located in the Coliseum, and will be of great interest. Prominent in the exhibit this year, and of great practical value, will be the offerings of boards of health of the large cities, pure food and public recreation commissions, etc., emphasizing the hygienic side. The exhibits of the pathologic and research laboratories and of individuals will be numerous and arranged in the most compact forms to afford a maximum of instruction with the least expenditure of time and effort. Expert demonstrators will be on hand to aid the visitors.

The following have signified their intention to participate:

University of Illinois
University of Minnesota
University of Missouri
University of Chicago
Tulane University, New Orleans
Northwestern University Medical School
St. Mary's Hospital, Rochester, Minn.
Babies' Dispensary and Hospital, Cleveland
Indianapolis Board of Health
New York City Board of Health
Missouri State Board of Health
Missouri State Veterinary Department
Washington University
Saint Louis University
City Hospital, St. Louis
City Department of Health, St. Louis
Saint Louis Medical History Club
St. Louis Antituberculosis Society
St. Louis Pure Food Commission
St. Louis Public Recreation Commission
D. H. Skinner, Kansas City
Fenton B. Turck, Chicago
H. D. Valin, Rochester, Minn.
W. W. Graves, Saint Louis
J. M. Ball, Saint Louis
J. J. Houwink, Saint Louis

FRANK B. WYNN, Director, Indianapolis.

WASHINGTON UNIVERSITY CLINICS

Below is a list of clinics and lectures to be given by Washington University Medical School in connection with the session of the *American Medical Association, running from* May 23 to June 4 and from June 13 to June 18. This schedule was received too late to be printed with the schedule of the St. Louis University, which appears on page 1535. No fee will be charged, but physicians expecting to attend must register for the clinical courses by letter to the medical department. Sections will be limited.

LECTURES 9 A. M. TO 10 A. M. DAILY

Monday, May 23	Wassermann test	Prof. Tiedemann
Tuesday, May 24	Protein molecule	Prof. Warren
Wednesday, May 25	Protein food	Prof. Mueller
Thursday, May 26	*Hormones*	Prof. McGuigan
Friday, May 27	Stool	Prof. J. Myer
Saturday, May 28	Air embolism	Prof. Blair
Monday, May 30	Infected hands	Prof. Newman
Tuesday, May 31	Hematology	Prof. Salter
Wednesday, June 1	Food Absorption	Prof. McGuigan
Thursday, June 2	Graphic methods in heart disease	Prof. Taussig
Friday, June 3	Present knowledge of cancer	Prof. Tiedemann
Saturday, June 4	Blood parasites	Prof. Whelpley
Monday, June 13	Gross *pathologic breast* cancer	Prof. Newman
Tuesday, June 14	Stomach contents	Prof. Hempelmann
Wednesday, June 15	Immunity	Prof. Tiedemann
Thursday, June 16	Laboratory methods	Prof. Taussig
Friday, June 17	Neurology	Prof. G. Campbell
Saturday, June 18	Medicine	Prof. Bewig

The *following* clinics will be given daily except Saturday:

DAILY CLINICS

CLINICAL MEDICINE

10 to 12 a. m.—Washington University Hospital: Drs. W. E. Fischel, A. E. Taussig, O. H. Campbell, Walter Fischel and W. H. Rush.

10 to 12 a. m.—Mullanphy Hospital: Drs. Elsworth Smith, L. H. Hempelmann and Fred Fahlen.

10 to 12 a. m.—Jewish Hospital Dispensary: Drs. Jesse S. Myer and Jerome Cook.

NEUROLOGY

10 to 12 a. m.—Washington University Hospital Dispensary: Drs. Given Campbell, William L. Nelson and J. M. Bradley.

10 to 12 a. m.—O'Fallon Dispensary: Drs. F. R. Fry, M. W. Hoge and Percy Farmer.

10 to 12 a. m.—Mullanphy Hospital: Fridays only, Dr. M. A. Bliss.

PEDIATRICS

11 to 1 p. m.—Washington University Hospital Dispensary: Drs. E. W. Saunders, John Zahorsky, M. J. Lippe and A. S. Bleyer.

3 to 4 p. m.—O'Fallon Dispensary and St. Louis Children's Hospital: Drs. G. M. Tuttle and H. M. Lowenstein.

3 to 5 p. m.—Bethesda: Drs. E. W. Saunders, B. W. Moore, A. Levy and T. W. White.

MEDICINE

3 to 4 p. m.—Washington University Hospital, Thursdays only: Drs. L. H. Behrens and W. L. Clapper.

3 to 5 p. m.—O'Fallon Dispensary: *Drs. Elsworth Smith, Henry* S. Brookes, H. W. Bewig, F. C. E. Kuhlmann and R. W. Mills.

SURGERY (CLINICAL AND OPERATIVE)

10 to 12 a. m.—Mullanphy Hospital: Drs. N. B. Carson, M. B. Clopton and C. E. Hyndman.

10 to 12 a. m.—St. Anthony's Hospital: Dr. Willard Bartlett.

10 to 12 a. m.—Jewish Hospital: Dr. Tuholske and assistant.

10 to 12 a. m.—Baptist Sanitarium: Only on notice, Dr. Tupper and assistant.

3 to 5 p. m.—Washington University Hospital: Drs. H. Tuholske, V. P. Blair, W. T. Coughlin, W. S. Deutsch, C. H. Dixon, Ernst Jonas.

10 to 12 a. m.—St. Luke's Hospital: Only on notice, Dr. Mudd and assistant.

GENITOURINARY

4 to 5 p. m.—O'Fallon Dispensary: Drs. E. C. Burnett and H. McC. Johnson.

4 to 5 p. m.—Washington University Hospital: Dr. W. M. Robinson.

OBSTETRICS AND GYNECOLOGY

Obstetrics: 10 to 12 a. m.—Washington University Hospital: Drs. Henry Schwarz, R. H. Fuhrmann, A. G. Schlosstein, Henry C. Storrs and William H. Vogt.

Gynecology: 10 to 12 a. m.—Washington University Hospital: Drs. H. S. Crossen, George Gellhorn, F. J. Taussig and H. A. Hanser.

Gynecology: 3:30 to 4:30 p. m.—O'Fallon Dispensary: Dr. Willis Hall.

Gynecology: 9 to 11 a. m.—Mullanphy Hospital: Thursdays only, Drs. F. A. Glasgow and A. C. Kimball.

SPECIALTIES

Eye: 2 to 3 p. m.—O'Fallon Dispensary: Drs. A. E. Ewing, Shoemaker, Charles, J. H. Gross and N. M. Semple.

Eye: 2 to 3 p. m.—Washington University Hospital Dispensary: Drs. H. L. Wolfner, M. Wiener, F. E. Woodruff and L. Williamson.

Nose and Throat: 2 to 3 p. m.—O'Fallon Dispensary: Drs. Greenfield Sluder, H. E. Miller and H. B. Miller.

Nose and Throat: 2 to 3 p. m.—Washington University Hospital Dispensary: Drs. H. C. Creveling and W. E. Sauer.

Otology: 2 to 3 p. m.—O'Fallon Dispensary: Drs. J. B. Shapleigh, A. F. Koetter and W. G. Krenning.

Otology: 2 to 3 p. m.—Washington University Hospital: Drs. H. N. Spencer, Selden Spencer and E. T. Senseney.

Dermatology: 2 to 3 p. m.—Washington University Hospital: *Drs. W. A. Hardaway, R. H. Davis and A. H. Friedeberg.*

11 a. m.—O'Fallon Dispensary and Mullanphy Hospital alternating: Drs. Joseph Grindon, Theodore Greiner and G. H. Raithel.

Orthopedic Surgery: 2 to 3 p. m.—Washington University Hospital: Drs. A. J. Steele and Nathaniel Allison.

Orthopedic Surgery: 2 to 3 p. m.—O'Fallon Dispensary: Drs. Philip Hoffman and F. H. Albrecht.

SPECIAL SATURDAY CLINICS

11 a. m. to 1 p. m.—Clinic not limited, at Washington University Hospital.

MEDICINE

Professor Fischel, Professor Fry, Professor Smith.

SURGERY

3 to 5 p. m.—Professor Tuholske, Professor Carson, Professor Tupper.

OTHER MEETINGS AT ST. LOUIS

Many Organizations to Hold Meetings Before or After the A. M. A.

A number of organizations of specialists or of those engaged in special lines of work are accustomed to hold their annual meetings just before or after the session of the American Medical Association and in the same city. They thus take advantage of the railroad rates and other arrangements and of the fact that their members will largely be present at the American Medical Association session. Some of these bodies have sent us preliminary announcements.

American Academy of Medicine, June 4-6.
American Gastro-Enterological Association, June 6-7.
American Medical Editors' Association, June 6.
American Proctologic Society, June 6.
American Society of Tropical Medicine, June 11.
American Urological Society, June 6-7.
Association of American Teachers of Diseases of Children, June 6.
American Association of Medical Milk Commissions, June 6.
National Confederation of State Medical Examining and Licensing Boards, June 6.

The fourth annual meeting of the American Association of Medical Milk Commissions will be held at the St. James Hotel, St. Louis, Monday, June 6. The three sessions will begin at 10 a. m., 2:30 and 8:30 *p. m.* The work of medical milk commissions has become a fairly definite science through the conferences and the labors of the special committees of this Association. Physicians, sanitarians and research workers will further elaborate the progress made the past year.

Among the subjects thus far assigned by the program committee are: "The Essentials Underlying the Production of Clean Milk," "The Bacterial Content of Milk from Cows Continuously Stabled," "The History, Development and Statistics of Milk Charities in the United States," "The Advantages, the Limitations and Some of the Results of Milk Charity Work," "The Production of Certified Milk." The secretary is Dr. Otto P. Geier, 124 Garfield place, Cincinnati.

The National Confederation of State Medical Examining and Licensing Boards will hold its twentieth annual meeting in St. Louis, Monday, June 6, at the Southern Hotel.

The subjects to be taken up at this meeting will be practical clinical instruction in medical colleges, a report on medical education in the United States by a representative of the Carnegie Foundation, and a report on a proposed materia medica list by a special committee. The chief object of this symposium is to determine, as far as possible, whether clinical instruction in medical schools can be made sufficiently practical and thorough so as to warrant the medical boards in demanding practical examinations in the principal branches of the medical course.

The secretary of the confederation is Dr. Murray Galt Motter, 1841 Summit place, N. W., Washington, D. C.

ALUMNI REUNIONS

The annual sessions always provide pleasant opportunities for renewing old friendships and alumni associations take especial advantage of this.

Alumni associations of medical schools wishing to establish bureaus for registration of their members, or to have reunions or banquets during the session, should communicate with Dr. Nathaniel Allison, chairman of the Subcommittee on Alumni Entertainments, 609 Metropolitan Building, St. Louis. These communications should be received by May 15.

The medical women's banquet will be held Tuesday, June 7, at 7 p. m. at the Jefferson Hotel, corner of Twelfth and Locust.

Alpha Epsilon Iota will hold a reunion, to be announced later. Headquarters will be maintained at the tea-room of the Jefferson Hotel between 12 and 2 p. m.

BALLOON RACES

In addition to the entertainments noted on a previous page, the visitors to St. Louis may see a balloon race. Through the efforts of Dr. M. B. Clopton, chairman of the Subcommittee on Halls, the governors of the Aero Club of St. Louis have decided to give a balloon race for the entertainment of the visitors to the session of the A. M. A. during the week of June 6, from the ascension grounds of the club on Choteau avenue. The exact date and time will be announced later.

VISITORS FROM ABROAD

Among the distinguished men from abroad who will take part in the sessions are:

Holger Mygind, Professor of Otology and Laryngology, University of Copenhagen, and connected with the Ear and Throat Clinic and the Finsen Light Institute, Copenhagen, is to be the guest of the Section on Laryngology and Otology.

Paul Fleischmann, Assistant in the First Medical Clinic in Berlin, is invited by the Section on Diseases of Children.

J. Herbert Parsons, F.R.C.S., etc., Assistant Surgeon Royal London Ophthalmologic Hospital, Assistant Ophthalmologic Surgeon University College Hospital, Ophthalmologic Surgeon Hospital for Sick Children, London, etc., will take part in the work of the Section on Ophthalmology.

A. Primrose, M.B.C.M., M.R.C.S., Professor of Anatomy and Clinical Surgery, University of Toronto, Toronto, Canada, will be the guest of the Section on Surgery and Anatomy.

ADDITIONAL RAILROAD INFORMATION

After this page was closed and about to go on the press, additional railroad information was received which appears in the News Department, under Philadelphia, this issue.

THE COMMERCIAL EXHIBIT

Books, Instruments, Appliances, Foods, Drugs, Furniture, Carriages, Automobiles, Etc., to Be Shown at St. Louis

The commercial exhibit at the St. Louis session will have commodious quarters in the Coliseum, at the corner of Washington and Jefferson avenues, together with the Scientific Exhibit, the Registration Bureau, the Post Office, etc.

Books, surgical instruments, diagnostic and therapeutic appliances, electric and *x*-ray apparatus and many other specialties of practical value for use in the medical art will be found in the Exhibit Hall. Well-known pharmaceutical houses and manufacturers of therapeutic and dietetic specialties will be represented. Several of these are making special arrangements to have exhibits which will not only be unusually attractive but unique and instructive in character. Among the books—as may be noted from the brief descriptions given below—there are many works on new subjects.

The surgical instrument exhibits, also, will show a distinct advance in practicability, the past year [illegible] new forms of diagnostic and operative [illegible] those pertaining to eye, ear, nose and throat work. Important improvements in electric, *x*-ray, light, vibratory and other apparatus will be demonstrated. New designs of physicians' office and reception-room furniture and equipment, operating tables, examining chairs, medicine cabinets of general utility, nebulizers, sterilizers, and other appliances are among the many articles to be displayed.

The whole exhibit will be of such interest and educational value that physicians will derive not only a great deal of pleasure but should secure many new ideas from a careful inspection of the various displays.

All correspondence with reference to reservations should be sent to Mr. Will C. Braun, Superintendent of Exhibits, 535 Dearborn avenue, Chicago. Dr. E. Lee Dorsett, 609 Metropolitan Building, St. Louis, is local chairman. The following firms will be represented at this exposition. Reservations have also been received from a number of others who have not, however, submitted descriptions of their exhibits:

D. Appleton & Company, New York City. Space 33.—The progressive character of this house will be shown by a glance at the new books and revisions of standard works, published during 1909. 1910 publications up to date are, Hall's "Nutrition and Dietetics," Haubold's "Preparation and After Treatment of the Patient in Operative Cases," Warbasse's "The Conquest of Disease Through Animal Experimentation," a revised edition of Keyes' "Genitourinary Diseases." Other American and foreign works that will appear within the next few weeks are Burrage's "Gynecological Diagnosis," Hoxie's "Symptomatic and Regional Therapeutics," Barr's "Modern Treatment of Syphilis," and Manquat's "Practical Therapeutics," a translation from the French.

Armour & Company, Chicago. Space 58.—The extensive amount of research work dealing with hormones of the ductless glands has aroused renewed interest in the thyroid and has extended the application of suprarenal preparations. The stimulating and growth-regulating properties of the pituitary body are known. Many lecithins and organ lipoids seem to play important rôles in immunizing processes. The preparations of thyroid, suprarenal, pituitary and parathyroid substances and other organotherapeutic agents will, therefore, be of great interest to the profession.

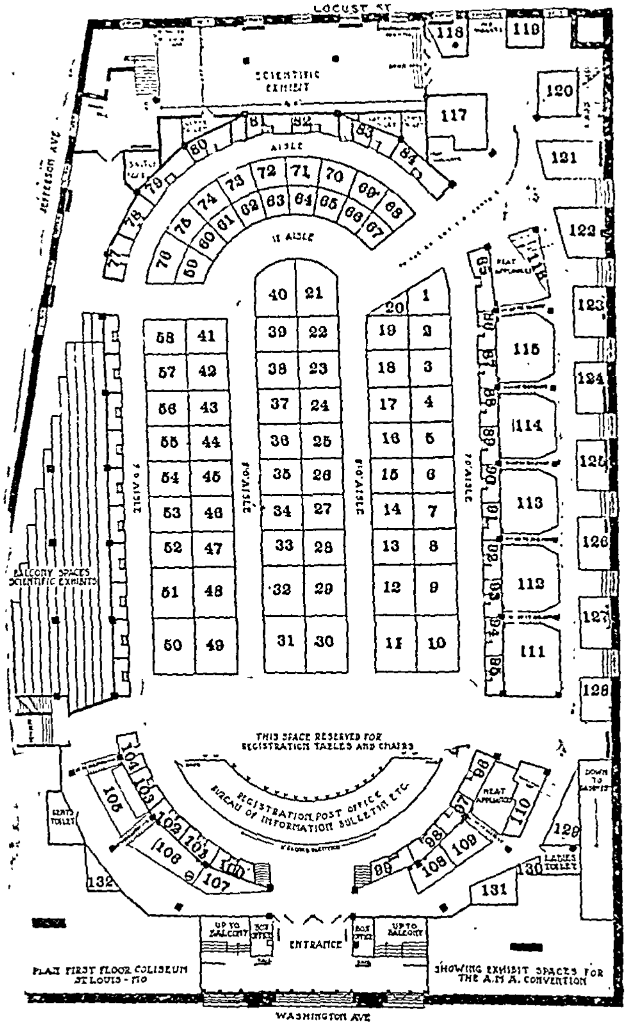
The Abbott Alkaloidal Company, Chicago. Spaces 8 and 13.—Will demonstrate the manufacture, therapeutic application, etc., of representative active principles, together with certain council-passed specialties. Different stages of manufacture, from the crude, raw material to the finished granule or tablet, will be shown. It is planned that a special part of the exhibit shall demonstrate the advantages of active-principle medication as compared with the use of galenical preparations.

The Allen Filter Company, Toledo, O. Space 92.—The Allen germ-proof filter will be the prominent feature of this display. That pure drinking water is one of the most essential factors in the prevention of infections of the alimentary tract needs no demonstration and an efficient filter is one of the best ways of procuring pure water.

W. D. Allison Co., Indianapolis. Spaces 22 and 39.—At the booth of this firm will be seen some new and improved features in the line of equipment—specialists chair, specialists cabinets, medicine and instrument cabinets, examination and treatment tables, reception room furniture and general accessories. Also a special rectal treatment table combined with an operating table and specialists' chair, which is said to be a complete appliance for both general and special practice.

AMBULATORY PNEUMATIC SPLINT MFG. CO., CHICAGO. SPACE 104.—This company will demonstrate ambulatory pneumatic splints for the treatment of fractures of the hip, thigh, leg, ankle and knee, either in or out of bed, as directed, by the surgeon. Dressings, massage and traction in all directions are readily applied and fixation maintained with these adjustable, washable splints.

AMERICAN CASE AND REGISTER COMPANY, SALEM, OHIO. SPACES 4 AND 17.—This exhibit will consist of a complete physician's and surgeon's account register in desk form. By the use of this system, and with comparatively little labor, accounts are at all times kept posted to date and easily accessible, and case records in the same way are kept complete and available. The desk itself is a handsome piece of furniture.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BALCONY SPACES SCIENTIFIC EXHIBITS
FLAT APPLIANCES
THIS SPACE RESERVED FOR REGISTRATION TABLES AND CHAIRS
REGISTRATION, POST OFFICE BUREAU OF INFORMATION BULLETIN ETC.
HEAT APPLIANCES
GENTS TOILET
LADIES TOILET
DOWN TO EXHIBITS
UP TO BALCONY
BOX OFFICE
ENTRANCE
BOX OFFICE
UP TO BALCONY
PLAN FIRST FLOOR COLISEUM ST LOUIS - MO
SHOWING EXHIBIT SPACES FOR THE A.M.A. CONVENTION
WASHINGTON AVE

Diagram of the Coliseum, showing the location of the Registration Bureau, where each member should register as soon as he can name his hotel in St. Louis; also the Postoffice, Scientific Exhibit, Daily Buletin office and the Commercial Exhibit. The accompanying list shows what firms will occupy the various numbered spaces.

THE ANATOMIK FOOTWEAR COMPANY, NEW YORK. SPACES 79 AND 80.—Will demonstrate rational footwear, shoes for the prevention and correction of weak ankles and flat foot, illustrating the principles involved by a working model. There will also be a display of discarded braces which have been replaced by Anatomik shoes made to correct the deformities. Stereopticon talks on the use of Anatomik shoes as substitutes for braces and operation will be given at intervals each day.

APOLLINARIS AGENCY COMPANY, NEW YORK. SPACE 97.—This company will exhibit Apollinaris, the well-known sparkling mineral water; Apenta, a natural aperient water, and Neuenhar, Germany, and Apenta from the neighborhood of Johannis-Lithia. Apollinaris comes from the spring at Budapest, Hungary. The exhibit will be in charge of a representative of the above agency.

ARLINGTON CHEMICAL COMPANY, YONKERS, N. Y. SPACE 49.—This company will exhibit liquid peptonoids and dry peptonoids soluble, and hemaboloids, together with some interesting scientific data regarding food values and the methods of preparation of these goods. An attractive and artistic souvenir will be presented to all physicians who visit the exhibit.

ART-ASEPTIBLE FURNITURE CO., ST. LOUIS, MO. SPACE 110.—This company will exhibit a recently developed line of metallic furniture finished with porcelain enamel; not the heavy cast iron bath room styles, but designs artistic and pleasing for offices. Also steel furniture resembling that made of wood, a line of pressure sterilizers for hospitals, of new design, an improved operating table, and many other developments that prove interesting and edifying to every physician.

ALEXANDER BEAUVAIS, NEW YORK. SPACE 90.—Food products of the Brusson Jeune Establishment (France) new to this country, consisting of gluten bread, gluten maccaroni, vermicelli, semolina, noodles, etc., which have an enviable reputation in Europe.

FRANK S. BETZ CO., HAMMOND, IND. SPACES 23, 37 AND 38.—This company will make an exhibition of a general line of surgical instruments, special razors and operating knives manufactured by experienced razor makers, nose and throat instruments imported from Vienna, also electrical outfits for general and diagnostic purposes and a variety of artificial legs. A special feature of the exhibit will be a German electric pocket telephone for the deaf. The telephone will be demonstrated on patients presented by physicians.

P. BLAKISTON'S SON & CO., PHILADELPHIA. SPACE 9.—At this exhibit will be shown, Gould's Illustrated Dictionary of Medicine with Supplement of 38,000 words bringing it up-to-date. Buckley; "Dental Materia Medica," second edition just issued. Lewis; "Medical Vademecum" in German and English. Thorington, "Refraction;" Spencer and Gask, "Practice of Surgery;" Gatewood, "Naval Hygiene;" Webster, "Diagnostic Methods;" Beard, "Ophthalmic Surgery;" Edgar, "Practice of Obstetrics;" Beattie and Dickson, "Pathology;" Turner and Stewart, "Nervous Diseases;" and other standard books.

BLEES-MOORE INSTRUMENT COMPANY, ST. LOUIS. SPACE 5.—The exhibit will be limited to those instruments and appliances representing new ideas for the general practitioner and surgeon, and will show especially the latest pattern of improved cystoscopes and blood-pressure apparatus.

BORDEN'S CONDENSED MILK CO., NEW YORK. SPACE 117.—Exhibit of their Malted Milk. They call attention to the fact that the casein of the milk has been partially predigested in the process of manufacture, and is entirely free from starch and cane sugar. They will have an analysis showing the energy (caloric) value of their food, which will be of assistance to physicians in percentage feeding.

BURROUGHS, WELLCOME & CO., NEW YORK CITY. SPACES 18 AND 19.—This firm will exhibit "Tabloid," "Soloid," "Vaporole," "Enule" and "Wellcome" brand chemicals, demonstrating the advancement made by the application of science to pharmaceutical products. Among recent additions may be mentioned "Vaporole," pituitary (infundibular) extract, "Soloid" brand water, sewage and urine test cases, "Soloid" bacteriologic outfits and "Tabloid" brand first-aid equipments for motor boats, aviators, autosists, etc.

CABINET MANUFACTURING COMPANY, QUINCY, ILL. SPACE 81.—A demonstration will be given by this firm of the latest improvements in the methods for obtaining fresh air at night in extreme cold weather. There is a demand on the part of many physicians for something better than the outdoor porch or open windows at night. The Walsh window tent is one of the few attempts made to solve this question. The benefit claimed for the tent is that it saves the energy which in a cold room would go to fight the cold. The tent can be made adjustable to any window or bed.

G. W. CARNRICK COMPANY, NEW YORK. SPACE 65.—The products of this company, antithermoline and trypsinogen, will be exhibited, and descriptive reading matter distributed to physicians. Drawings from microscopic sections of the human pancreas showing degenerative changes in the islands of Langerhans as a result of diabetes will be shown.

The Chicago Medical Book Company, Chicago. Spaces 47 and 48.—This company will display a complete assortment of the latest American and English medical publications. Books on the specialties and monographs will be a special feature of the exhibit. A full line of their own publications will also be shown.

The Chicago Surgical and Orthopedic Company, Chicago. Space 88.—This firm will exhibit a complete line of hand-forged surgical knives of their own make and Mr. Kratzmueller will have personal charge of the display. His associate, Mr. Ambrosius, will demonstrate a number of orthopedic appliances made according to the "Hessing" method, exhibited for the first time in this country.

Clark & Roberts Company, Indianapolis. Space 57.—Aseptic furniture has become recognized and approved by the medical profession as a scientific aid in the prevention of infection in the operating room and it has become indispensable in physicians' offices, hospitals, and even in private houses. The above firm is showing a complete and up-to-date line of these goods which will be very interesting from both a scientific and educational standpoint.

The Deimel Linen-Mesh System Company, New York. Space 35.—Many of our readers are acquainted with the product which this well known concern manufactures, namely, the Dr. Deimel linen-mesh underwear. It was placed before the public some seventeen years ago and is recognized as the correct covering for the human body in all seasons and in every land. Their exhibit will consist of garments in all styles and weights.

The DeVilbiss Manufacturing Company, Toledo, O. Space 52.—This company, manufacturers of Medicinal Atomizers, Nebulizers and Powder Blowers exclusively, will have a display of their well known line as usual, and among other things will show for the first time their new improved instrument rack and heater combined, which will be very interesting to physicians. They will take pleasure in demonstrating their instruments, and showing the many advantages of DeVilbiss Atomizers, either for office use or for the home use of the patient.

The DeZeng-Standard Company, Philadelphia. Space 66.—A complete line of electrically lighted diagnostic eye, ear, nose and throat instruments will be exhibited by this company, including cystoscopes, urethroscopes, rectal tubes, etc., of new and improved design; also electrical controllers, batteries and portable apparatus. Demonstrators will be in attendance. The demonstration of the new DeZeng Headlight should prove an interesting feature of the exhibit.

The Duntley Manufacturing Company, 234 Michigan Avenue, Chicago. Space 118.—Will have an exhibit which should claim the interest of every physician in attendance. The Duntley pneumatic cleaner and the Duntley air purifier is said to represent a step forward in preventing medicine and physicians should be amply repaid for the time spent at their exhibit.

Electro Surgical Instrument Company, Rochester, N. Y. Space 36.—Will exhibit a complete line of electrically lighted surgical instruments, including auriscopes, nasal and other scopes and specula for all body cavities, illuminated eye spuds, transilluminators, and tongue depressors. There will also be shown a variety of batteries; the E. S. I. Co. socket current controller, which adapts the street current for use with electrically lighted instruments, and the new E. S. I. Co. socket cautery transformer.

Fairchild Bros. & Foster, New York City. Space 5.—This firm, which makes a specialty of the digestive ferments, will exhibit products from the gastric and pancreas glands, for use in internal medicine, for preparing foods for the sick; for "topical" application; for hypodermatic use. They will also exhibit, in capsules, an extract of the pancreas combined with bile salts, and a preparation in tablet form, of the true Bulgarian (oriental) bacillus, for the treatment of autointoxication.

Fayette Manufacturing Company, Lexington, Ky. Space 84.—Exhibit will consist of a display on plaster figures of the different styles of Fayette supporters. The supporter is claimed to be a scientific device built on mechanical principles for the purpose of holding the organs of the body in correct position. They are said to be used by earnest physicians all over the United States and in many foreign countries.

Joseph C. Ferguson, jr., Philadelphia. Space 24.—An interesting and up-to-date exhibit is promised by this firm, of instruments and supplies used in the treatment of affections of the eye, ear, nose and throat. As the work of this company is devoted exclusively to the manufacture of apparatus and instruments used in these special branches, it is intended to make the display both comprehensive and complete.

The Franco-American Food Company, New York. Spaces 43 and 56.—Propose to exhibit and demonstrate their special broths for invalids. This company's soups are largely sold throughout the United States, but the profession generally does not know that they prepare broths with very little salt and no vegetables or spices. This specialty should overcome the difficulty that nurses experience in many households in obtaining good broths for their patients.

Fouts & Hunter Carriage Manufacturing Company, Terre Haute, Ind. Space 122.—The exhibit of the Cozy Cab at the 1910 convention will be of an educational nature, important features being brought out prominently by models. The 1911 Medic Cozy Cab will attract more than passing attention for the reason that it is to be given away to some lucky physician attending the convention. Every physician will have an opportunity to take part in the contest.

Funk & Wagnalls Company, New York. Space 85.—Publishers of "The Literary Digest." They have the American rights in the Cassell (London) medical books. There are several new titles, including Bramwell's "Hypnotism," Wichkam & Degrais' "Radiumtherapy," Ricketts & Byles' "Smallpox;" also new additions of Hutchinson's "Syphilis," etc. Dubois' and Schofield's books on mental therapeutics are also published by this house, and with books of Gould, Bland-Sutton, Bosanquet, Bruce, Malcolm Morris, Frederick Treves and others, will be shown at St. Louis.

F. A. Hardy & Company, Chicago. Spaces 14 and 15.—This exhibit will be complete and contain many new and improved surgical instruments pertaining to the eye, ear, nose and throat. This firm caters particularly to specialists doing this line of work, and has made many new instruments during the year designed by a number of well-known specialists. In addition a full exhibit of ophthalmic specialties will be made, including a new Cogan prism chart for detecting and placing muscular errors.

Hettinger Bros. Manufacturing Company, Kansas City, Mo. Space 3.—This firm will exhibit a general line of high grade surgical instruments, special features being nose and throat and genitourinary instruments, latest pattern cystoscopes and sphygmomanometers, and high grade leather goods.

The Wm. Hettich Co., Chicago.—This company will present the Wagner mica plate static machine, having purchased the patent rights, good will and stock of the late R. V. Wagner Co., of Chicago, and in connection with their own line of *x*-ray coils and electro-therapeutic apparatus their exhibit will be interesting to physicians, especially those having static machines made by the late Wagner company and those interested in *x*-ray and electro-therapeutic apparatus.

The Hoffmann-La Roche Chemical Works, New York (branch of F. Hoffman-La Roche & Company, Basle, Switzerland, and Grenzach, Germany). Space 2.—The exhibit will embrace not only the specialties, Digalen, Thiocol, Airol, Thephorin and Benzosalin, but also an imposing array of high-class chemicals and alkaloids—Atropin, Homatropin, Eserin, Pilocarpin, etc. This display should be well worth careful inspection.

Horlick's Malted Milk Company, Racine, Wis. Spaces 41 and 42.—Horlick's Malted Milk is an easily disgested food-product of delightful flavor, and very convenient, since a meal may be prepared in a moment. The chief claims made for it are that it is reliable and uniform, made with the experience, methods, and apparatus evolved by their work of over a third of a century in this line. As a dietetic adjunct it has been largely used and freely endorsed.

The Kirby System Company, Detroit. Space 77.—"Penny wise" or "pound foolish," which? In many ways you forget items of vital interest in connection with the clinical and financial history of your patients. You haven't the time to keep a set of books; your practice doesn't warrant a bookkeeper;

therefore your bookkeeping is neglected. "The Kirby System" is said to solve the problem.

Kny-Scheerer Company, New York City. Space 16.—This firm will display the products of its manufacturing plants, located in the United States and in Europe. The scope which this company covers is rather extensive; it comprises (1) high grade surgical instruments; (2) aseptic hospital furniture and sterilizers; (3) electromedical apparatus including a new type of *x*-ray apparatus, and (4) scientific apparatus for laboratory work. Among these will be many new articles which no doubt will be of unusual interest to the surgeon and diagnostician.

Lea & Febiger, Philadelphia and New York. Space 11.—The imprint of the "House of Lea," now in its 126th year, is accepted as *prima facie* evidence of value in any book bearing it. Examples to be exhibited are, Osler's "Modern Medicine," in seven volumes; Martin's "Surgical Diagnosis," compact and comprehensive; Weeks on the "Eye," the coming authority. Important new editions are, Adami's "General Pathology," Koplik on "Children," Stimson on "Fractures and Dislocations," Whitman's "Orthopedic Surgery," Hyde on the "Skin," Edwards' "Practice," Brewer's "Surgery." Hare's "Therapeutics," Hare on "Typhoid and Other Exanthemata," Starr on "Nerves," Woolsey's "Surgical Anatomy," Ballenger on the "Throat, Nose and Ear," Park's "Micro-organisms" and Abbott's "Bacteriology."

Ernst Leitz, New York City. Space 7.—Will demonstrate the Leitz universal projection apparatus (microscopic projection in the highest magnification, *x*-ray plates, mounted and unmounted anatomical specimens, and even parts of the human body), and illustrate a method of teaching microscopy with the apparatus after Professor Edinger. Unstained micro-organisms will be shown under dark ground illumination; also microscopes, microtomes and photo-micrographic apparatus.

J. B. Lippincott Company, Philadelphia. Space 10.—This company will have an unusually large number of important medical books, and an examination of the display will convince the physician that the rapid advance in medicine is being kept space with. Among those to be shown are De Forest Willard's "The Surgery of Childhood," Rotch's new work, "The Roentgen Ray in Pediatrics," Gwilym G. Davis' "Applied Anatomy," George A. Piersol's revised "Normal Histology;" "Lippincott's New Medical Dictionary," with many new features; Hirschfelder's "Diseases of the Heart;" Earl's "Diseases of the Anus, Rectum and Sigmoid," and James C. Wilson's "Medical Diagnosis," a new second edition having been required within eight months.

The Macalaster-Wiggin Company, Boston and Chicago. Space 93.—Will exhibit some new types of *x*-ray tubes, especially adapated for use with heavy apparatus. This firm manufactures a complete line of *x*-ray tubes and accessories. Various forms of protective goods, including tube shields of all kinds, gloves, spectacles, and the like, will also be shown by it. The new catalogue will be distributed at that time.

The Maltine Company, Brooklyn, N. Y. Space 34.—Will exhibit Maltine and its various combinations, together with the crude drugs, etc., which enter into their composition, and demonstrate their diastasic strength, miscibility and nutritive value, [illegible] attention to maltine with olive oil and [illegible] recent addition. Many physicians claim that olive oil is as valuable a medicinal food as cod liver oil and that patients take it more readily.

L. S. Matthews & Co., St. Louis, Mo. Spaces 94 and 95.—Will have a complete and interesting display of all the latest standard publications on surgery, eye, ear, nose and throat in space 95, while general medicine and subjects allied thereto will be found in space 94, both located well to the front of the coliseum, on the right as you enter. This division will greatly facilitate the house's efforts in demonstrating their books.

McIntire, Magee & Brown Company, Philadelphia. Space 107.—It is said that every operator who has tried to hold the ordinary condensing lens between the fingers of the left hand, and at the same time, hold the patient's eyelid open when removing foreign bodies, will be impressed with the usefulness and adaptability of the Dr. Powell's adjustable condensing lens put out by this firm. This instrument, made with adjustable arm to fit over the third finger of the hand, is one of the many interesting things that will be shown in this exhibit.

Mellin's Food Company, Boston. Spaces 59 and 60.—To every physician interested in the problem of infant feeding the company presents this year a new edition of their book, "Formulas for Infant Feeding." In this book the question of calories as well as percentages is given consideration, and suggestions are offered for varying the amount of fat, proteid and carbohydrate to meet individual conditions. This work is the result of an effort to give a method of infant feeding that is scientific, rational and practical.

The McIntosh Battery and Optical Company, Chicago. Space 54.—Will exhibit their new Type 12 Wall Plate, a unique design, containing a dial selector, affording choice of eleven modalities, eliminating all switches; also their improved alternating current rectifier with potential equalizer, an exclusive device, affording a steady, direct current for wall plates. Their line of transformers and head lamps will be of interest to eye, ear, nose and throat specialists.

The Wm. Meyer Company, Chicago. Space 121.—A new type of Roentgen apparatus, several types of portable high frequency coils, new types of head lamps, urethroscopes, cautery appliances, transformers, batteries, wall plates, rectifiers (in operation) giant magnets, and other useful electrical appliances adapted to the needs of the up-to-date physician will be demonstrated.

Meier Dental Manufacturing Company, St. Louis. Space 67.—The Elbrecht Proctoclysis Outfit will be demonstrated. By means of an automatic heating device especially designed to maintain the physiologic saline solution at a uniform heat, this apparatus will hold a constant temperature at all times without attention. In the same space the C. DeWitt Lukens Surgical Company will exhibit a line of aseptic suture material and other surgical specialties.

E. B. Meyrowitz, New York City. Spaces 45, 46 and 53.—This firm will exhibit: An entirely new system for generating currents for *x*-ray and high frequency operations; an apparatus which will deliver initial frequencies of from 30 to 500 cycles into a closed magnetic circuit transformer, producing a uni-directional secondary current without the use of valve tubes or rotating high potential switches; also a new compression diaphragm for rapid radiography.

C. V. Mosby Medical Book and Publishing Company, St. Louis. Space 50.—A complete line of English, French and German medical publications will be shown, including Ochsner and Thompson's "Surgery and Pathology of the Thyroid and Parathyroid Glands," Dock and Bass' "Hook Worm Disease," Taussig's "Prevention and Treatment of Abortion," Hirschman's "Hand Book of Diseases of the Rectum," and Longyear's Nephrocoloptosis." They are special agents for Jacobi's "Dermochrome," "Atlas of Clinical Surgery," Burghard's "Operative Surgery," and "A System of Syphilis," by Power and Murphy.

V. Mueller & Co., Chicago.—Space 12.—The specialist as well as the general practitioner is constantly in search of apparatus to help him in establishing correct diagnoses. At the coming meeting this firm will display its best and most useful electrically lighted diagnostic instruments, such as pharyngoscopes, bronchoscopes, etc. New instruments for the general surgeon and the eye, ear, nose and throat specialist will also be on exhibit.

H. K. Mulford Company, Philadelphia. Space 32.—Charts and apparatus will be shown illustrating the manufacture and preparation of diphtheria antitoxin and globulin, the bacterial vaccines and smallpox vaccine, together with the medicinal preparations of this well-known firm.

Philadelphia Surgical Specialty Company, Inc. Space 118.—Will exhibit their multum in parvo "Simplex Surgeon," a practical and scientific instrument, and in connection with the Weder Manufacturing Company, Inc., a line of eye, ear, nose and throat instruments. Being a strictly wholesale house, all orders received will be forwarded through your local instrument dealers.

The Physicians' Record Company, Chicago. Space 70.—Will display and demonstrate a moderate priced and simple system of case-history recording and accounting, consisting of history sheets which carry the complete, illustrated case history and the account and which simplify materially the work of recording. Other parts of the system, as the leather pocket cases, filing cabinets in various finishes, charts, etc., will constitute part of the display.

Reinschild Chemical Company, New York City. Space 71.—This firm will have on exhibition its new organic iron and manganese salts. These, it is claimed, can readily be dissolved in cold water, furnishing neutral, clear inodorous liquors; this enables physicians to have their liquors made when wanted, in any quantity, and always fresh. Professor Schmidt's regulin for chronic constipation will also be shown and sampled, as well as other specialties.

Roentgen Manufacturing Company. Space 73.—The Snook Roentgen Apparatus, placed on the market three years ago, which is used by many of the best x-ray experts and hospitals in this country and abroad, will be exhibited by its manufacturers and patentees. The latest development in stereoscopic apparatus and automatic plate-changer will also be shown.

The Robertson Manufacturing Company, Cincinnati. Space 74.—Expect to exhibit their vacuum cleaning machines and the Gold Medal spraying and nebulizing outfits advertised in The Journal. These inexpensive outfits are said to be growing in favor with the profession because they do the same work as the old cumbersome, complicated and expensive machines and require less labor and are less liable to get out of order.

The Rochester Surgical Appliance Company, Rochester, N. Y. Space 116.—Makers of electrically lighted instruments, will exhibit their latest models, containing new features, including their new magnetic eye spud, Mark's air dilating urethroscope, Law's pneumatic procto-sigmoidoscope, cystoscopes and instruments for the transillumination of the antrum of Highmore and the frontal sinus, electrical controllers, etc.

W. B. Saunders Company, Philadelphia and London. Spaces 30 and 31.—Will occupy a prominent position opposite the Bureau of Registration and Information and the Post Office. They will exhibit new books of interest, among them, Keen's "Surgery," Moynihan's "Duodenal Ulcer," Crandon's "Surgical After-Treatment," Gant's "Constipation and Intestinal Obstruction," Tousey's "Medical Electricity and X-Ray," Kemp on the "Stomach and Intestines," Deaderick on "Malaria," McKenzie on "Exercise," Cotton's "Dislocations and Joint Fractures;" new editions of deSchweinitz on the "Eye," McFarland's "Pathology," and DaCosta's "Modern Surgery;" advance sheets and illustrations of the Musser-Kelly work on "Treatment," Mumford's "Practice of Surgery," Hinsdale's "Hydrotherapy," Sisson's "Veterinary Anatomy," Anders-Boston's "Diagnosis," Fenwick on "Dyspepsia," and Davis' "Operative Obstetrics."

The Schacht Manufacturing Company, Cincinnati. Space 127.—This firm have specialized in making a car that will meet the requirements of physicians. They will exhibit their Doctor's Special Runabout. Claims made for this car are that it is speedy, dependable, easily controlled, simply constructed, handsome and inexpensive in maintenance and first cost. The manufacturers will explain by demonstration how this model solves the transportation problem for the profession.

Scheidel-Western X-Ray Coil Co., Chicago. Space 29.—Each year radiography is being reduced to a simpler and more comprehensive science. The Scheidel-Western X-Ray Coil Company will demonstrate this year their method for taking radiographs by formula and show their Radiographic Special, adapted for this purpose. Their radiographic portable developing rockers, illuminating cabinets and compression apparatus in several forms will make a most interesting exhibit.

Dr. G. H. Sherman, Detroit. Space 89.—Wright's Bacterial Vaccines prepared from carefully selected cultures and put up in sterile vials will be displayed. The value of prepared vaccines from cultures of specific organisms is becoming each year more generally recognized by the profession and this exhibit will undoubtedly prove instructive.

Smith, Kline & French Company, Philadelphia. Spaces 63 and 64.—This exhibit will be entirely in the interest of Eskay's Food. A practical demonstration will be given in the way of display jars, showing the composition of the food. One will contain the cereals, one the sugar of milk and eggs, while another will show the finished product. It will also demonstrate how the curd of cow's milk is formed in the human stomach and how Eskay's Food prevents the formation of such curd.

E. R. Squibb & Sons, New York. Spaces 61 and 62.—Announce that they will exhibit something special that will be a surprise to the physicians.

Taylor Instrument Companies, Rochester, N. Y. Space 119.—Exhibit of the Dr. Rogers "Tycos," sphygmomanometer, a portable, blood pressure instrument, with new sleeve, having no hooks, eyes, buttons, buttonholes, or straps and buckles; the "Tycos" fever thermometer, case and holder, thoroughly protecting thermometer, doing away with chain and pin, while providing a safety clasp for the vest pocket; high grade urinalysis glassware and the Hygrodeik for determining humidity.

The Terre Haute Inhalatorium Cabinet Co., Terre Haute, Ind. Space 128.—Will contain an exhibit of the inhalatorium manufactured by the company. All progressive physicians will be interested in this exhibit. The inhalatorium is used in treating catarrh, hay fever, bronchitis, asthma and pulmonary tuberculosis by means of volatilized medication.

Truax, Greene & Co., Chicago. Spaces 25, 26, 27 and 28.—Will have one of the largest individual displays at this convention, covering the latest designs and methods of construction in hospital and physicians' office furniture, sterilizing apparatus and the latest patterns in instruments and appliances for the physician and surgeon. This exhibit will embrace bone specimens and anatomic models which will be of special interest to the members of the Association.

The Victor Automobile Mfg. Co., St. Louis, Mo. Space 112.—Will exhibit at the convention hall, in addition to its regular touring car, a Victor M. D. style, especially designed for doctors, with interchangeable solid-tire wheels for winter use. This is a "classy" runabout for professional work and contains space for medicine case, instruments, etc. It can be converted into a handsome four-passenger rig for family use.

Victor Electric Co., Chicago. Spaces 21 and 40.—This company will exhibit a most complete line of x-ray and electrotherapeutic apparatus. Several important additions have been made to their line, and among the new apparatus is the Wantz radiographic induction apparatus, capable of doing instantaneous radiography, and a universal compression-diaphragm, tube-shield and stand. This outfit is one of the newest appliances turned out by the Victor company, and every interested physician is urged to see it.

The Wallace Adjustable Bed Company, Chicago. Space 72.—Will demonstrate a bed designed for the easy handling of the sick and injured; eliminating a great amount of labor in nursing. It is made of metal, in four sections, each independent, and operated with a removable crank, giving all positions. Bed is equipped with springs and mattress complete for use.

Henry K. Wampole Company, Philadelphia. Spaces 44 and 55.—This company will make an exhibit of elegant pharmaceuticals, comprising pulverous pills, compressed tablets, fluidextracts, elixirs, effervescent salts, capsules, etc., and direct especial attention to the new things brought out during the past year, and to its ability to produce efficient and elegant products for the physician.

The Wappler Electric Controller Company, New York. Space 87.—Will exhibit the Brown Buerger and F. Tilden Brown composite and other cystoscopes, and urethroscopes, the Hays pharyngoscope, head lights, diagnostic lamp controllers, cautery generators and portable high frequency machines. Also their new Cautery and Light Transformers; one for alternating current only, and another for direct or alternating current, 110 or 220 volts.

Weissfeld Brothers, New York. Space 130.—Will exhibit their duck uniforms and a line of hospital uniforms and physicians' coats. To those physicians who have use for such products this display should prove of more than ordinary interest.

The Welch Grape Juice Company, Westfield, N. Y. Spaces 75 and 76.—Will have an exhibit of their well-known product, as usual.

William Wood & Company, New York. Spaces 1 and 20.—Among other books on exhibit will be: Byrant and Buck's "American Practice of Surgery," by America's foremost surgeons; "Reference Hand Book of the Medical Sciences," Witthaus and Becker's "System of Medical Jurisprudence;" "Urgent Surgery," by Felix Lejars, a unique work; Chapin and Pisek's "Diseases of Children," complete and compact; Craig's new book on "Malaria;" Jardine's "Clinical Obstetrics," a book for the practitioner; Onodi's "The Optic Nerve and the Accessory Sinuses of the Nose," containing fifty superb life-size illustrations, and fifty other new books on all medical topics.

THE YEAR BOOK PUBLISHERS, CHICAGO. SPACE 86.—The Practical Medicine series published by this company is a system of practice covering every department of medicine and surgery as these departments have appeared in the literature of the year. It consists of ten small, well-edited volumes issued at equal intervals during the year, each on a different subject, the ten comprising a permanent record of the year's progress.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1910," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 1369)

AGAR-AGAR.—Agar-agar (Agar-agar. Pharm. Française, 1908) is a substance extracted in the East Indies from various sea weeds.

This substance seems to come principally from Eucheuma gelatinum, E. spinosum (Linné) J. Agardh., Gelidium corneum (Hudson) Lam., G. cartilagineum Gaill., Gloiopeltis tenax (Turner) J. Agardh.

Agar-agar is extracted by hot water and dried for commercial purposes in the form of bundles of shreds, or powder form. It is odorless and insipid, insoluble in cold water but soluble in hot water. A solution containing 1.5 per cent. gives quite a stiff jelly on cooling.

Agar-agar consists practically of gelose, which dissolves in 500 parts of water and is precipitated in an impure form by alcohol. Gelose is a carbohydrate which is converted into galactose on boiling with dilute sulphuric acid. On drying at 100° C. agar-agar loses about 20 per cent. of water. 100 parts of dry substance furnish about 4 parts of ash, which, when treated with hydrochloric acid and examined with the microscope, shows the presence of diatoms, the most characteristic of which are Arachnoidiscus—Ehrenbergii Baill. and several Grammatophora and Cocconeis. An aqueous solution of agar-agar gives no precipitate with solution of tannic acid (absence of gelatin), and no blue color with solution of iodin (absence of starch).

Actions and Uses.—Agar-agar absorbs water in the stomach and intestines and forms a jelly, which being indigestible increases the bulk of the feces.

It is employed as a demulcent and for the treatment of constipation.

Dosage.—From 5 to 15 Gm. (75 to 240 grains). Agar-agar is administered in substance, coarsely comminuted and mixed with food.

COPPER CITRATE.—Cuprum Citricum.—Cupric Citrate.—Copper citrate is the cupric salt of citric acid, containing 34 to 36 per cent. of copper.

It occurs as a green, or bluish-green, finely crystalline, odorless powder. It is but slightly soluble in cold water. Somewhat more soluble in a cold solution of an alkali citrate, forming a greenish blue solution. More soluble in a hot solution of an alkali citrate; also soluble in ammonia water and in mineral acids.

When dissolved in ammonia water copper citrate yields an intense blue solution.

When heated to 90° C. (194° F.) the salt loses water of hydration and assumes a pale blue color. At higher temperature it blackens and at a low red heat leaves a black residue of cupric oxide.

Copper citrate should contain copper equivalent to from 34 to 36 per cent. of metallic copper.

If about 1 Gm. of copper citrate be dissolved in 20 Cc. of diluted hydrochloric acid, the solution diluted to 200 Cc. with hot distilled water, the mixture saturated with hydrogen sulphide, filtered, and the filtrate evaporated nearly to dryness on the water bath, the residue should respond to the usual tests for citric acid.

If 0.5 Gm. of copper citrate be dissolved in 10 Cc. of diluted hydrochloric acid and 1 Cc. of barium chloride test solution be added no turbidity should at once occur (limit of sulphate).

A solution of 0.5 Gm. of the salt in 10 Cc. of diluted sulphuric acid should not evolve any odor of acetic acid when boiled.

The salt should be free from nitrates, chlorides and carbonates.

Actions, Uses and Dosage.—Copper citrate possesses the astringent and antiseptic properties of other salts of copper somewhat modified by its sparing solubility.

It may be used for the same purposes and in doses similar to those of other salts of copper.

Non-Proprietary Preparations:

Copper Citrate, Mallinckrodt.—Manufactured by the Mallinckrodt Chemical Works, St. Louis, Mo.

Copper Citrate Ointment, 5 per cent., M. E. S. Co.—An ointment containing 5 per cent. of copper citrate and 95 per cent. of white petrolatum, without alcohol or preservative. Manufactured by the Manhattan Eye Salve Co., Owensboro, Ky.

Copper Citrate Ointment, 10 per cent., M. E. S. Co.—An ointment containing 10 per cent of copper citrate and 90 per cent. of white petrolatum, without alcohol or preservative. Manufactured by the Manhattan Eye Salve Co., Owensboro, Ky.

CARBOSANT.—Santalolis Carbonas.—Carbosant is santalyl carbonate, $CO(OC_{15}H_{23})_2 = C_{31}H_{46}O_3$, the carbonic acid ester of santalol.

Carbosant is produced by the chemical interaction of santalol with carbonyl chloride, $COCl_2$, and alkalies, or with carbonic acid esters.

Carbosant is an oily yellow fluid, almost tasteless and odorless, insoluble in water, and soluble in alcohol and ether. It contains 94 per cent. of santalol.

Carbosant is saponified when heated with an alcoholic solution of caustic alkali with the production of potassium carbonate and santalol, both of which can be identified by appropriate tests.

Actions and Uses.—The action of carbosant which is chemically broken up into its component parts in the intestine is identical with that of santalol, the official constituent of sandal wood oil. It tends to diminish the secretions of the mucous membrane of the urinary tract, and to relieve pain in the urinary organs.

Carbosant is said to be useful in the treatment of gonorrhea, cystitis and prostatitis.

Dosage.—0.6 Cc. (10 minims) three times daily. It may be given in capsules, each containing 0.3 Gm. (5 grains), 2 capsules being given three times daily.

Manufactured by the Chemische Fabrik von Heyden at Radebeul near Dresden, Germany. German patent No. 182,627. U. S. trademark applied for.

(To be continued)

The Functional Adaptability of the Walls of the Blood-Vessels to New Blood-Pressures and the Histology of Transplanted Blood-Vessels.—Experiments were undertaken in a series of dogs to determine to what extent the walls of the blood-vessels, particularly the veins, are capable of accommodating themselves to an increased blood-pressure, and to study the histologic changes that take place in a transplanted blood vessel. B. Fischer and Schmeden (*Frankfurt. Ztschr. f. Path.*, 1909, iii, 8) transplanted pieces of blood-vessels according to the method devised by Carrel. At various intervals after the operation the segments of the blood-vessels which contained the point of union between the transplanted and the normal blood-vessel were taken out, placed in fixing fluid and examined histologically. To test the effect of an altered current and blood-pressure on the vessels, two types of experiments were carried out: the arteria carotis communis was cut and its central end sutured to the peripheral end of the cut vena jugularis externa and vice versa; and a piece of the vena jugularis externa was resected and transplanted, with double row of circular sutures, between the two stumps of the cut carotid artery. These vessels were selected because there is a greater difference in the thickness of their walls and in their respective blood-pressures than in any other corresponding vessels. It was found that, at the point of junction, histologic union established itself remarkably well in all cases, including the transplants. "Increased blood-pressure cannot in itself produce a lasting progressive dilatation of the blood-vessel." Although there normally never exists in any of the veins a blood-pressure as high as in the arteries (and in the jugulars the pressure is very slight—often negative) it was found that the veins in both types of experiments were capable of withstanding the increased blood-pressure and, apparently as a result of it, became smaller in caliber. Macroscopically and microscopically the walls of the veins showed stronger than before the operation.

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[*For other information see second page following reading matter*]

SATURDAY, MAY 7, 1910

PREVIOUS ST. LOUIS SESSIONS: A RETROSPECT

THE SESSION OF 1854

The approaching session of the American Medical Association will be the fourth to be held in St. Louis. In 1854, the Association, then only seven years old, met on May 2, in Veranda Hall. In the absence of the President, Dr. Jonathan Knight of Connecticut, Dr. Usher Parsons of Rhode Island presided. Dr. James R. Washington of St. Louis, chairman of the local committee on arrangements, welcomed the members and, according to the minutes, "concluded by reading a list of the members who had registered—those present, at the suggestion of Dr. March of Albany, rising and answering as they were severally called." This was not difficult of accomplishment, as only 269 were present.

The minutes of the session are most interesting, as showing the condition of medical practice and professional affairs fifty-six years ago. A letter was read from Dr. John G. Adams, a member traveling in Europe, stating that he had presented the sixth volume of the *Transactions of the American Medical Association* to the Imperial Academy of Medicine at Paris, and asking that the five preceding volumes be sent, as the academy had assured him that it would be pleased to "establish a correspondence with the American Medical Association." The volumes were ordered sent as requested.

Dr. John L. Atlee of Pennsylvania reported as chairman of the committee appointed to procure a stone with a suitable inscription for insertion in the Washington monument, which was at that time being built. He reported that at the suggestion of Dr. Pierson, of Salem, Mass., the design selected "represented Hippocrates refusing the presents of the ambassadors of King Artaxerxes, who invited him to go to Persia and succor the enemies of Greece. The sculpture, which was on Vermont marble, was wrought by Mr. Samuel Beck, a young artist of Lancaster County, Pa." Dr. Atlee presented with his report daguerreotypes of the stone and "solicited further contributions from members; the sum yet required to complete the work being about $400." Dr. Ninian Pinckney, United States Navy, read a paper expressing the thanks of the medical staff of the United States Navy for the assistance afforded by the Association in bringing about the proper organization of the medical staff.

On the second day of the session, Dr. Linton of St. Louis presented certain views which he entertained in regard to the pathology of yellow fever, "endeavoring in an able argument to prove the identity, in cause and nature, of yellow, bilious, and other so-called miasmatic fevers. He attributed them all to a hydrocarbonaceous state of the blood." Dr. F. Donaldson of Baltimore read a report on the present and prospective value of the microscope in disease, which aroused considerable interest. The Committee on Prize Essays reported that the prize for the year had been awarded to Dr. Daniel Brainard of Chicago, for an essay on "Treating Ununited Fractures." Dr. C. B. Guthrie of Memphis, Tennessee, introduced resolutions commending the action of the Secretary of the Treasury in recommending that the duty on crude drugs be abolished. Dr. A. D. Spoor of New York presented a report on hydrophobia, containing the results of an investigation which he had undertaken into the question whether it was safe and wise for municipal authorities to enact laws restricting the muzzling of dogs to "dog-days" only; also, what influence climate might have in the production of hydrophobia. Dr. Ramsey of Tennessee asked for the appointment of a committee to investigate charges made against members of the Association who had given testimonials for proprietary remedies. Dr. N. S. Davis of Chicago called the attention of the Association to "the great sacrifice of health and life which takes place annually, especially among the children of large cities, on account of the difficulty of procuring a proper supply of pure and wholesome milk, and the great importance of devising some mode by which milk can be preserved."

Systematic organization of the profession was evidently being discussed then as now. A committee on plans of organization for state and county societies was appointed and on motion of Dr. Atlee of Pennsylvania the immediate organization of state and county medical societies, where such did not already exist, was earnestly recommended. The report of the treasurer showed that the financial transactions of the Association for the year amounted to $3,962.50, and that the balance in the treasury at the time of the St. Louis session was $293.84.

THE SESSION OF 1873

The second session of the Association held in St. Louis was on May 7-9, 1873. The Association met at the Masonic Temple, and was called to order by the retiring President, Dr. D. W. Yandell of Kentucky, the President-Elect, Dr. Thomas M. Logan of California, taking the chair after the opening exercises. Dr. John S. Moore, chairman of the local Committee on Arrangements, in welcoming the delegates in behalf of the local profession, referred to the wonderful growth of St. Louis, which he said "has grown up, like Jonah's gourd, in a night. Thirty-three years ago, when I first became a resident of this city, it was a French village.... with a population of 16,000. Now, we have a river frontage of fourteen miles and a population of 450,-

000." Dr. Moore also referred to the medical colleges of St. Louis, saying, "The St. Louis Medical College has a building on the corner of Seventh and Myrtle Streets. The Missouri Medical College is now erecting a college edifice on the corner of Twenty-third and Christie Avenue, its former capacious building on the corner of Eighth and Gratiot Streets having been used by the Federal Army during the war as a military prison." The attendance at this session was much larger than at the previous one, 452 delegates being present. The Committee on Arrangements reported that the following entertainments had been provided for the Association: "On Tuesday evening at 8 o'clock, the members of the Convention are invited to a *soirée musicale,* to be held at Mercantile Library Hall, corner of Fifth and Locust Streets. On Wednesday evening, at 8 o'clock, the delegates and their ladies are invited to a levee to be held at the residence of Col. J. L. D. Morrison, on the corner of Locust and Ewing Avenues. On Friday, the Association will make an excursion to Tower Grove Park and Garden. The directors of the St. Louis Mutual Life Insurance Company invite the Association at their convenience to visit their building from the top of which can be obtained an excellent view of the city and its surroundings."

Much attention was devoted at this meeting to organization matters, a long report on the organization of the sections being presented. At this session, Dr. N. S. Davis presented an amendment to the By-Laws providing for the first time for a Judicial Council to take the place of the old Committee on Ethics. Dr. J. J. Woodward of the United States Army presented a memorial from the medical officers of the Army asking that the Association take action to secure for Army surgeons an equal footing with those of the Navy. Dr. N. S. Davis offered an amendment to the By-Laws limiting the right to send delegates to permanently organized state and county societies. Dr. Frederick Horner, Jr., of Virginia, offered a series of resolutions providing for the appointment of a committee of one member from each of the thirteen original states to prepare an exhibit on medical, surgical and biographic literature of the medical profession of 1776 for exhibition "at the approaching Centennial Celebration to be held in Philadelphia." Dr. A. N. Bell of New York offered resolutions advocating the establishment of a national sanitary bureau, with relations to the general government similar to those of the Bureau of Agriculture and the Bureau of Education, as a means of promoting sanitary science and the protection of the public health. In spite of the fact that nineteen years had elapsed since the previous St. Louis session, the financial affairs of the Association were in about the same condition, the treasurer's report showing total transactions of $6,614.40, with a balance on hand of $496.74. A report appears in the *Transactions* for this year showing all of the medical associations and hospitals in the United States at that time, the total number of medical societies being given as 408, with a total membership of 22,791, while the total number of hospitals at that time was 178, of which 83 were public and 39 private.

THE SESSION OF 1886

The third St. Louis session of the Association occurred in 1886, the Association meeting in the Exposition Building on May 4, the president, Dr. William Brodie of Detroit, being in the chair. Mayor D. R. Francis delivered the address of welcome to the Association. In his address, the President recommended that Congress be memorialized on the resolutions then pending to appoint a scientific commission of three physicians to visit Cuba, Mexico and Brazil to study yellow fever, with a view to determine the validity of the claims made that the means of preventing this disease had been discovered. Resolutions were presented denouncing the endorsement by certificate, advertisement, testimonial, or indirect approval of proprietary medicines and appliances, the President stating in his address that "the stigma of professional disgrace shall rest on any regularly educated physician who allows his name to be advertised as the endorser of any patent, secret or proprietary medicine."

The Board of Trustees reported regarding the publication of The Journal, then in its third year. This report showed a circulation of 4,271 copies, of which 3,337 went to members and 645 to subscribers. Dr. N. S. Davis, the editor of The Journal, reported that during the preceding year, he had established a printing office, owned and conducted exclusively in the interests of The Journal and that the Association owned property which was insured for $800. The entire cost of the plant, with expenses to date of the report amounted to $1,044.88. A resolution offered by Dr. Albert L. Gihon, United States Navy, was adopted directing the Section on State Medicine to prepare and report at the next meeting a form of law regulating the practice of medicine for uniform adoption by the different states.

Regarding this session, The Journal stated that the attendance was unusally large, about 1,100 being present. No mention is made of social features in connection with this meeting, but there is no doubt that the physicians and citizens of St. Louis entertained the Association with the hospitality which always characterizes her people.

The approaching session of the Association bids fair not only to eclipse all of the previous sessions held in St. Louis, as is to be expected from the remarkable growth of the Association, but to surpass in attendance and interest any previous session of the Association, with the possible exception of the 1908 session in Chicago. It is by no means certain that, largely owing to the energy and enthusiasm of the St. Louis members, even that record, which now stands as the high-water mark of the Association, may not be passed. Members of the Association will see a city far larger than that in which they were welcomed in 1854, 1873, or 1886, while the citizens and physicians of St. Louis will greet an Association vastly greater in numbers, influence, responsibility and possibilities. The scientific programs published in this issue, indicate that the coming session will equal if not surpass in scientific work any meeting heretofore held.

GINGIVITIS IN DIABETES

The importance of mouth symptoms in the acute infections, such as scarlet fever, diphtheria and measles, is recognized. It is less generally known, however, that in many constitutional conditions the mouth secretions and the mucous membranes covering the gums, cheeks, tongue, etc., furnish early and positive data for diagnosis.

It has been proved that gingivitis is an early and prominent symptom in many cases of diabetes mellitus and continues throughout the course of this disease. Many good books on general medicine ignore this fact, however. Osler, who so seldom misses a point, makes no mention of gingivitis in diabetes, but does say that "the tongue is usually dry, red and glazed and the saliva scanty; the gums may become swollen, and in the later stages of the disease aphthous stomatitis is common."

J. Redier[1] makes the definite statement that in diabetes the saliva contains sugar which undergoes lactic fermentation, in consequence of which both the teeth and the gums suffer.

G. Lemoine[2] thinks that the complications of diabetes involving the digestive apparatus are far from rare, especially the mouth complications. "Among the more frequent," he says, "is gingivitis of the simple congestive, suppurative or expulsive type; this gingivitis seems due to the rapid multiplication of microbes in the buccal cavity."

Ludwig Brandt[3] says that alveolar atrophy begins around the incisor teeth of the lower jaw, which have the weakest roots and the most delicate alveolar lamellæ. He mentions especially the influence of disorders of nutrition on pyorrhea, and cites as constitutional causes mercury taken as a medicine or introduced into the system by constant handling, diabetes, rheumatic and acute arthritides, scurvy, syphilis, tuberculosis and certain nervous diseases such as neurasthenia, tabes and progressive paralysis.

The first symptom of gingivitis is usually a sensation of itching and burning in the gums, which is sometimes disquieting enough to bring the patient to the physician, when careful examination may discover one or more loose teeth. Suppuration may not be present at this time. At a later stage little or no pain is present, but there is marked retraction of the gums, loosening of all the teeth and the oozing of pus from the tooth sockets. In late stages the teeth drop out or must be extracted.

It is interesting to note that the onset, both of pyorrhea and of diabetes, takes place most frequently between 20 and 30 years of age and that males are more frequently affected. The upper jaw is more resistant than the lower, and the disease usually begins around the lower incisors, as already mentioned. The treatment is of course essentially constitutional, supplemented by local applications.

It becomes a matter of extreme importance, therefore, that the general practitioner shall examine the mouths of all patients, taking careful note of the mucous membrane of the cheeks, beneath the tongue, on the tongue itself, the roof of the mouth, and especially the gums.

PROFESSIONAL FEES FOR PHYSICIANS IN ANCIENT BABYLONIA

In the Code of Hammurabi, a king of Babylon about 2250 B. C., we have the earliest extant record of a legal scale of physicians' fees. The late Professor Harper, of the University of Chicago, in his translation of the Code of Hammurabi[1] gives in their entirety the articles of that code relating to physicians' fees as follows:

"215. If a physican operate on a man for a severe wound (or make a severe wound on a man) with a bronze lancet and save the man's life; or if he open an abscess (in the eye) of a man with a bronze lancet and save that man's eye, he shall receive ten shekels of silver (as his fee).

"216. If he be a freeman, he shall receive five shekels.

"217. If it be a man's slave, the owner of the slave shall give two shekels of silver to the physician."

For less important operations smaller fees were fixed. The same proportion was maintained between the fees for the upper, the middle, and the laboring classes. The code said:

"221. If a physician set a broken bone for a man or cure his diseased bowels, the patient shall give five shekels of silver to the physician.

"222. If he be a freeman, he shall give three shekels of silver.

"223. If it be a man's slave, the owner of the slave shall give two shekels of silver to the physician."

On the other hand, penalties were inflicted for malpractice. The three paragraphs on this subject are interesting:

"218. If a physician operate on a man for a severe wound with a bronze lancet and cause the man's death; or open an abscess (in the eye) of a man with a bronze lancet and destroy the man's eye, they shall cut off his fingers.

"219. If a physician operate on a slave of a freeman for a severe wound with a bronze lancet and cause his death, he shall restore a slave of equal value.

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[1] Stomatologie, Paris, 1909, I, 331.
[2] Thérap. méd., Ed. 5, 1909, p. 224.
[3] Chirurgie für Zahnärzte, Berlin, 1908, pp. 226 et seq.

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[1] The Code of Hammurabi, King of Babylon, University of Chicago Press, 1904. See also Holmes, Bayard: The Most Ancient Medical Practice Laws, The Journal A. M. A., Jan. 28, 1905, p. 293.

"220. If he open an abscess (in his eye) with a bronze lancet, and destroy his eye, he shall pay silver to the extent of one half of his price."

It will be noted that this code recognizes the principle of regulating fees according to the patient's ability to pay. Just what would be the value of these ancient fees in our present money is extremely difficult to determine. We do not know the exact value of a shekel at that time, nor do we know the comparative value of silver then and now. In Babylon, sixty shekels made one mina, a weight equal to nearly one kilogram, or about two pounds. Ten shekels would weigh about a hundred and sixty-five grams. Five and a half ounces of silver in our time would be a comparatively small fee; but the value of money, of course, depends on its purchasing power. In Babylonia, in the time of Hammurabi, the yearly wage of an ordinary laborer was eight shekels of silver. For a capital operation therefore, that is, one that saved the life or an eye of a patient, the Babylonian physician was paid a fee equal to one and a quarter times the wages of a workman for a year. In our time this would be something between five hundred and one thousand dollars. Such charges were for the ordinary men of means. For the nobility and rulers special arrangements were made, and then, on the other hand, there were gradual reductions in the fees, as stated, for the poorer classes. Even making allowance for the probability that the level of subsistence among ordinary laborers was very low, it would seem that the Babylonian physician received a fairly satisfactory remuneration for his skill and learning, and that four thousand years ago the medical profession was highly esteemed and rewarded.

PUBLIC LECTURES ON CIVIC TOPICS

The City Club of Chicago has inaugurated a free lecture bureau through which lectures on civic and social subjects are offered to the public by members of the club and others. These lectures are placed at the disposal of churches, societies, clubs and other organizations and are a part of the campaign of the club undertaken to arouse greater interest in civic problems. While most of these lectures have to do with economic and social matters, many of them touch on subjects which have a medical interest, as, for instance, "What the Chicago Tenement Should Be," by Mr. Charles D. Ball, Chief Sanitary Engineer of the Chicago Health Department; "Chicago's Health and Its Economic Value," by Dr. W. A. Evans, Commissioner of Health; "Fatigue in Industrial, Commercial and Professional Life," by Dr. Henry B. Favill. This is one indication of an important movement, the significance of which may easily be overlooked, and the part which physicians are taking in it should arrest attention for a moment. There is a growing demand on the part of the public for information on all subjects which pertain to improvement in living, whether along social, economic or sanitary lines. This is well shown by the eagerness with which people buy and read articles on such subjects which have appeared in recent periodical literature. This demand cannot be too carefully heeded by the profession. The county society, as the organized representative of the medical profession, can and should cultivate this promising field for public instruction. When all parts of our existing organization study the signs of the times and improve to the full the opportunities of the present, the influence of the medical profession, both individually and collectively, will be vastly increased and society will be greatly benefited thereby.

DR. RICKETTS A MARTYR TO SCIENCE

As we go to press, notice reaches us of the death of Dr. Howard Taylor Ricketts at Mexico City, from typhus fever, a disease which he was at the time engaged in investigating. Dr. Ricketts was one of the foremost research investigators of this century; his researches on blastomycosis, his study of the Rocky Mountain fever, which occupied several summers in Montana, and his most recent work on typhus fever, have made his name known and honored throughout the scientific world. Some of this work has been done under grants from the Committee on Scientific Research of the American Medical Association, and for many years he has been a valued editorial writer on THE JOURNAL. Since his graduation in medicine in 1897, Dr. Ricketts has been an investigator and teacher. He was associate professor of pathology in the University of Chicago, and recently had been made professor of pathology in the University of Pennsylvania, a position which he accepted with the proviso that he was to be free during the winter, spring and coming summer to pursue his research work on typhus fever in Mexico. His untimely death is due indirectly to his insatiable desire for work, as he was almost worn-out from overwork before he went to Mexico. Dr. Ricketts was modest and unassuming in demeanor, earnest and sincere in all his dealings, and his fine character endeared him to all who were privileged to know him. His work was for humanity and his death is a loss to the world of science.

Medical News

ALABAMA

Fraternity Election.—At the annual election of the Phi Chi Medical Fraternity, held in Mobile during the session of the State Medical Association, the following officers were elected: President, Dr. John A. Lanford, Tuscaloosa; vice-president, Dr. James H. Blackwell, Birmingham; and secretary-treasurer, Dr. Thomas F. Taylor, Tuskegee.

State Association Meeting.—At the annual session of the Medical Association of the State of Alabama, held in Mobile, April 19-22, under the presidency of Dr. Wooten M. Wilkerson, Montgomery, the following officers were elected: President, Dr. Wyatt H. Blake, Sheffield; junior vice-president for the northern division, Dr. Charles Lee Guice, Gadsden; censors, Drs. Vivian P. Gaines, Mobile, and Thaddeus L. Robertson, Birmingham; orator, Dr. Jesse G. Palmer, Opelika, and councilors-elect, Drs. Lamartine O. Hicks, Jackson; Thaddeus J. Pruett, Hurtsboro; Albert J. Peterson, Goodwater; Mack Rogers, Birmingham; Charles Hayes, Hanceville, and James G. Donald, Pineapple. Montgomery was selected as the next place of meeting.

ARIZONA

Sanatorium for Fraternal Order.—A committee of the Knights of Columbus is investigating sites for a tuberculosis sanatorium for the order in Arizona. Phoenix, Flagstaff, Tucson, Bisbee and Douglas are the localities under consideration.

State Society Meets.—The nineteenth annual meeting of the Arizona Medical Association was held in Phoenix, April 20-22, under the presidency of Dr. Robert N. Looney, Prescott, the subject of whose address was "Medical Education." The oration in medicine was delivered by Dr. J. Wilson Shiels, San Francisco, and the oration in surgery by Dr. Wesley W. Beckett, Los Angeles. The following officers were elected: President, Dr. John W. Foss, Phoenix; vice-presidents, Drs. Francis E. Shine, Bisbee; Ira E. Huffman, Tucson, and Roderick D. Kennedy, Globe; secretary, Dr. John W. Flinn, Prescott (reelected); treasurer, Dr. Enoch B. Ketcherside, Yuma (reelected); councilor, Dr. William I. Simpson, Phoenix, and delegate to the American Medical Association, Dr. William V. Whitmore, Tucson. It was decided to hold the next annual meeting in Bisbee. The House of Delegates passed resolutions endorsing the resolutions adopted by the House of Delegates of the American Medical Association regarding the amendments to the national Food and Drugs Act.

ARKANSAS

New Graduates.—The College of Physicians and Surgeons, Little Rock, graduated a class of 29, April 29.——The annual commencement exercises of the Medical Department of the University of Arkansas were held May 2. Professor Brough of the university delivered the commencement address, and the valedictory was delivered by Dr. Orange K. Judd, city physician of Little Rock.

Personal.—Major George D. Deshon, Medical Corps, U. S. Army, commanding officer of the Army and Navy General Hospital, Hot Springs, has been made a member of the Hot Springs Medical Board, which hereafter is to be known as the Federal Registration Board.——Dr. Henry O. Walker has been elected president of the board of health of Newport.——The home of Dr. John A. Henry, Hope, was destroyed by fire, April 11, with a loss of $1,500, partially covered by insurance.

County Society Meetings.—Drew County Medical Society, at its meeting held in Monticello, elected the following officers: Dr. William A. Brown, Monticello, president; Dr. Albert S. J. Collins, Monticello, secretary, and Dr. Michael B. Corrigan, Hot Springs, delegate to the state society.——Chicot County Medical Society, at its annual meeting in Eudora, elected Dr. Elwood Baker, Dermott, president; Dr. Samuel A. Scott, Eudora, vice-president, and Dr. Paul E. Johnson, Blissville, secretary-treasurer.——Nevada County Medical Society, at its meeting in Prescott, elected the following officers: President, Dr. Simeon J. Hesterly; vice-president, Dr. G. O. Marsh; secretary-treasurer, Dr. Albert S. Buchanan, and delegate to the state society, Dr. William W. Rice, and alternate, Dr. Albert S. Buchanan, all of Prescott.——Hempstead County Medical Society, at its annual meeting in Hope, elected the following officers: Dr. T. J. Garner, Washington, president; Dr. John L. Kelley, Hope, vice-president; Dr. John H. Weaver, Hope, secretary-treasurer; Dr. John S. Waddle, Shelton, delegate to the state medical society, and Dr. John H. Weaver, Hope, alternate.——At the annual meeting of Boone County Medical Society, held in Harrison, Dr. Alfred M. Hathcock, Harrison, was elected president; and Dr. Hugh L. Routh, Batavia, treasurer.——Craighead County Medical Society was reorganized April 20, at Jonesboro with a membership of 14. Dr. Charles M. Lutterloh was elected president; Dr. John T. Altman, treasurer, and Dr. Homer A. Stroud, librarian, all of Jonesboro.

CALIFORNIA

Will Not Continue Emmanuel Movement.—It is announced that St. Luke's Hospital, San Francisco, after a year's experience with the Emmanuel movement, the treatment of disease by the combination of mental suggestion and medicine, has discarded the treatment.

Antituberculosis Society Meets.—At the annual meeting of the San Diego branch of the California Association for the Study and Prevention of Tuberculosis, Dr. Fred R. Burnham was elected first vice-president; Dr. Francis M. Allen, second vice-president; Dr. Thomas S. Whitelock, treasurer, and Dr. Addison Morgan, a director.

Society Meeting.—Orange County Medical Society, at its annual meeting, held in Orange, elected the following officers: President, Dr. Charles C. Violett, Garden Grove; vice-president, Dr. Jesse M. Burlew, Santa Ana; secretary, Dr. Ida B. Parker, Orange, and treasurer, Dr. Howard S. Gordon, Santa Ana.

Health Associations Merged.—A federation of the public health associations of California was formed at Sacramento, April 18. The new organization is to be known as the California Public Health League.——Dr. Fitch C. E. Mattison, Pasadena, was elected first vice-president; Dr. George H. Aiken, Fresno, third vice-president; Dr. William F. Snow, secretary of the State Board of Health, secretary-treasurer, and Drs. W. Jarvis Barlow and George H. Kress, Los Angeles; Dr. Rexwald Brown, Santa Barbara, and Dr. Gayle G. Moseley, Redlands, members of the board of directors.

Personal.—The charge of battery made by Mateo Brezzini against Dr. Dunlop Moore, U. S. P. H. and M. H. Service, was dismissed by the United States Commissioner of San Francisco, April 19.——Dr. William G. Beattie, Colma, has been reappointed health officer of San Mateo county.——Drs. Robert P. McReynolds, Orville O. Witherbee and H. Haynes Koons have been suggested as a board of assistant consulting surgeons of Los Angeles.——Dr. William E. Downing has been elected president, and Dr. Frederick T. Bond (reelected), health officer of Vallejo.——Dr. David Powell has been chosen president of the board of health of Marysville.——Dain L. Tasker, Los Angeles, has been elected president of the State Board of Medical Examiners.

Hospital Notes.—The recently appointed staff of the Pasadena Hospital has decided to establish free clinics for the school children of the city. Dr. Henry B. Stehman has been elected president of the staff of the hospital and Dr. William D. Dilworth, secretary.——The new St. Mary's Hospital, which will occupy the block bounded by Hayes, Grove, Shrader and Stanyon streets, San Francisco, will be the largest hospital west of Chicago; will be a five-story and basement steel-frame structure of mission style, and will cost about $1,000,000. The central portion and east wing will be completed this year, at a cost of $350,000.——Mrs. Lewis Monteagle, San Francisco, has offered to erect an additional building for St. Luke's Hospital, San Francisco, in memory of her late uncle, Calvin Page, to cost $400,000.

State Society Meeting.—At the fortieth annual meeting of the Medical Society of the State of California, held in Sacramento, April 19-21, under the presidency of Dr. James H. Parkinson, Sacramento, the following officers were elected: President, Dr. John C. King, Banning; vice-presidents, Drs. A. B. Grosse and J. Henry Barbat, San Francisco; secretary and editor of the *California State Medical Journal*, Dr. Philip Mills Jones, San Francisco (reelected); councilors, Drs. George H. Kress, Los Angeles, Second District; Curtis G. Kenyon, San Francisco, Sixth District; Francis M. Pottenger, Los Angeles, at large (reelected), and James H. Parkinson, Sacramento, Eighth District, and delegate to the American Medical Association, Dr. Joseph L. Milton, Oakland. The next meeting will be held in Santa Barbara in April, 1911.

COLORADO

Building for Doctors.—The Metropolitan Building now being erected at Sixteenth street and Court Place, Denver, is a six-story structure to cost $400,000, and to be used for offices for physicians.

Consumptive Camps.—The Colorado Association for the Prevention and Control of Tuberculosis will establish two free camps for consumptives in Denver, one in Pueblo, one in Colorado Springs, and one in the Arkansas Valley.

Personal.—Dr. Charles F. Andrew, Longmont, has started for Europe.——Dr. George B. Gilbert, resident physician at Cragmore Sanatorium, Colorado Springs, has resigned.——Dr. David P. Mayhew, Colorado Springs, has returned from abroad.

Health Farm Closed.—The Y. M. C. A. Health Farm of 35 acres in Wheatridge, Jefferson county, the site for which was given by David Brothers six years ago, was closed May 1, on account of lack of funds. The ground will revert to the donor.

Sanatorium Notes.—More than $25,000 has already been subscribed for the Associated Charities Sanatorium, Colorado Springs.——The first of the course of lectures under the auspices of the Colorado State Association for the Prevention and Control of Tuberculosis was given before the State Normal School, Denver, April 11.

Dependents in State Institutions.—The State Board of Charities is prosecuting a rigorous inquiry regarding the status of dependents in state institutions for the purpose of deporting those whose support properly belongs in other countries. The federal government will return the insane and tubercular who have not been in this country three years.

GEORGIA

Graduation Exercises.—The annual graduation exercises of the Atlanta School of Medicine were held April 25, when a class of 67 was graduated. Dr. Wyman W. Pilcher, Warrenton, delivered the annual address and Bishop Nelson delivered the diplomas.——At the commencement exercises of the University of Georgia, Augusta, held May 2, diplomas were conferred on a class of 18 by Chancellor David C. Barrow.

Personal.—Dr. Henry M. Fullilove, Athens, has been reelected physician of Clarke county.——Dr. Tully M. Talbott, Valdosta, is reported to be seriously ill.——Dr. J. R. B. Branch, Macon, has succeeded Dr. Eugene B. Elder as physician to the Macon Hospital.

Protest Against Tuberculosis Hospital.—A temporary injunction is said to have been issued April 22 against C. S. Hodson and Clarence T. Holliday, Atlanta, restraining them from establishing a tuberculosis sanatorium on a tract of land at Cornell Station, on account of the proximity of dairy farms to the site.

State Association Meeting.—The Medical Association of Georgia held its sixty-first annual session in Athens April 20-22, under the presidency of Dr. Thomas J. McArthur, Cordele. The following officers were elected: President, Dr. Edward C. Davis, Atlanta; vice-president, Dr. Marcus F. Carson, Griffin; secretary-treasurer, Dr. William C. Lyle, Augusta (reelected), and councilors, Drs. Isham H. Goss, Athens, Eighth District; William B. Hardman, Commerce, Ninth District; J. Lawton Hiers, Savannah, First District; Wyman W. Pilcher, Warrenton, Tenth District; Frederick D. Patterson, Cuthbert, Second District, and Abner W. Calhoun, Atlanta, Seventh District. The councilors from the other districts were reelected. Rome was selected as meeting place for 1911.

ILLINOIS

State Society Meeting.—The Illinois State Medical Society will hold its sessions in the Woman's Club Rooms, Danville, and the public reception will be given at the First Methodist Church. The address in medicine will be delivered by Dr. Charles G. Stockton, Buffalo, N. Y.

Hospital Notes.—The directors of the corporation of Silver Cross Hospital, Joliet, have taken steps to establish a maternity cottage at the institution, to cost $15.000.——The work on the Moline City Hospital is almost completed, and the new building will soon be ready to receive patients.——Dr. Benjamin H. S. Angear, Sublette, will erect a sanatorium in that city, to cost about $5,000.

Chicago

Hospital Days.—May 15 and 16 have been decided on as Hospital Days, on which contributions for hospitals will be asked by 176 women volunteers.

Dispensary Opened.—The new Emmanuel Memorial Dispensary, at Maxwell and Wallace streets, erected at a cost of $50,000, was dedicated April 24.

Training School Incorporated.—The Passavant Hospital Training School for Nurses has been incorporated by Dr. Oren J. Waters, Herman L. Fritchel and Martha Gensike.

Personal.—Dr. and Mrs. Casey A. Wood have returned from Europe.——Dr. Henry B. Favill has been elected president of the City Club.——Dr. Aloys Heinen has started for Germany.

INDIANA

Mutual Protective Association.—Physicians of Bartholomew county have organized a mutual protective association to insure better collections.

Had His Stomach Removed.—Peter Ruby, New Albany, aged 45, who had his stomach removed four years ago and had been fed through a fistula since that time, died from starvation April 19. The case had been reported in various medical journals.

Donation to Antituberculosis Society.—Dr. James Y. Welborn, Evansville, president of the Vanderburg County Antituberculosis Society, announces a donation of $5,000 to the association, provided that $5,000 additional is raised in membership fees or by subscription.

Pure Food Prosecution.—During March, 18 successful and 3 unsuccessful prosecutions were instituted by the State Pure Food and Drug Commissioner against food dealers, and in the 18 successful cases the defendants were fined each $10 and costs. During the month 918 places where food is prepared or sold were inspected. Of these 25 were reported excellent; 445, good; 360, fair; 74, poor, and 14, bad.

District Society Meeting.—At the fifth annual meeting of the Eighth District Medical Society, held April 21 in Muncie, the bill before congress for the creation of a national department of health was endorsed. Dr. William D. Schwartz, Portland, was elected president; Dr. Samuel Hollis, Hartford City, vice-president; Dr. Frederick McK. Ruby, Union City, secretary-treasurer, and Dr. Clay A. Ball, Muncie, censor.

MARYLAND

Social Hygienists Meet.—The third annual meeting of the Maryland Society of Social Hygiene was held in Baltimore April 19. The principal address was made by Dr. Lewellys F. Barker, Baltimore, on "The Importance of the Eugenic Movement and Its Relation to Social Hygiene." Dr. Franklin B. Smith, Frederick, was elected president; Dr. Lewellys F. Barker, Baltimore, first vice-president; Dr. Brice W. Goldsborough, Cambridge, third vice-president; Dr. Donald R. Hooker, Baltimore, secretary, and Dr. Charles O'Donovan, Baltimore, member of the executive committee.

County Society Meetings.—The semi-annual meeting of the Montgomery County Medical Society was held in Rockville, April 19. Dr. William L. Lewis, Kensington, was elected president; Dr. James D. Morgan, Chevy Chase, vice-president; Dr. John L. Lewis, Bethesda, secretary-treasurer; censors, Drs. Claiborne H. Mannar, Rockville, and Frederick N. Henderson, Rockville; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. James E. Deets, Clarksburg, and alternate, Dr. Otis M. Linthicum, Rockville.——Cecil County Medical Society, at its annual meting, held in Elkton, April 21, elected Dr. Charles M. Ellis, Elkton, president; Dr. Samuel T. Roman, Conowingo, vice-president; Dr. Howard Bratton, Elkton, secretary-treasurer; Dr. Charles F. Miller, Zion, censor, and Dr. Robert M. Black, Cecilton, delegate to the Medical and Chirurgical Faculty of Maryland.

State Society Meeting.—The one hundred and twelfth annual session of the Medical and Chirurgical Faculty of Maryland was held April 26-28 and the following officers elected: President, Dr. Franklin B. Smith, Frederick; vice-presidents, Drs. John Staige Davis, Baltimore; Harry B. Gantt, Millersville, and Timothy Griffith, Frostburg; secretary, Dr. John Ruhräh, Baltimore; treasurer, Dr. William S. Gardner, Baltimore; trustee, Dr. Thomas A. Ashby, Baltimore; delegate to the American Medical Association, Dr. Ridgeley B. Warfield, Baltimore, and councilors, Drs. Hiram Woods, Lewellys F. Barker, G. Milton Linthicum and R. Lee Hall, all of Baltimore. A bronze medallion of Dr. William H. Welch was presented to the society by Dr. Charles M. Ellis, Elkton, and $5,222.51 was turned over by the president, on behalf of the society, for the establishment of a fund to be known as the Isaac Ridgeway Trimble fund. This fund is to be invested and the interest used for scientific lectures at the hall. The annual oration was delivered by Dr. Clemens S. Von Pirquet.

Baltimore

Painting Presented.—An oil painting of Dr. Moreau Forest, a graduate of the class of 1826 of the University of Maryland School of Medicine, has been presented to that institution by the daughter of Dr. Forest.

Personal.—Dr. David Streett, dean of the Baltimore Medical College, was operated on, April 26, for appendicitis.——Dr. William F. Schwartz has been appointed physician of the state penitentiary, vice Dr. Theodore Cooke, Jr., and Dr. Gustave H. Wolterack has been appointed assistant physician.——Dr. Eugene L. Opie has been appointed a member of the faculty of Washington University, St. Louis.——Dr. Robert W. Johnson sailed for Europe April 30.——At the annual meeting of the Johns Hopkins Chapter of the Phi Beta Kappa Fraternity, held April 26, Dr. Ira Remsen was elected president and Dr. Lewellys F. Barker vice-president.

MASSACHUSETTS

Society Meeting.—The annual meeting of the Hampden District Medical Society was held in Springfield April 19. Dr. Harvey W. Van Allen was elected president; Dr. Ralph H. Seelye, vice-president, and Dr. Parker M. Cort, secretary-treasurer, all of Springfield.

Clinical Week.—The annual clinical week exercises of the Boston University School of Medicine, consisting of clinics, clinical lectures, demonstrations and didactic lectures, will be held at the school buildings from May 30 to June 4, inclusive. The course is open to all graduates in medicine without charge. Information regarding the course may be obtained from Dr. Frank C. Richardson, 80 East Concord street, Boston.

Military Medical Items.—Major William R. P. Peterson has been made president, Major B. F. Butler, recorder, and Major Frank P. Williams, Boston, a member of the Board of Medical Examiners of the Massachusetts Volunteer Militia.——Lieutenant Calvin B. Faunce, Boston, Medical Department M. V. M., has been relieved from duty with the ambulance section of the hospital corps and transferred to the hospital section.

Infantile Paralysis.—The State Board of Health has issued a circular concerning anterior poliomyelitis, in which the following points are emphasized: The disease is infectious; the disease is contagious; the disease is probably transmitted not only from patient to patient but through the mediation of third persons; many so-called abortive or atypical cases occur in every epidemic of the disease, and these cases should be regarded with suspicion and constitute an important link in the epidemic chain. The board suggests the use of hexamethylenamin in the treatment and prophylaxis of the disease.

Personal.—Dr. Francis X. Mahoney has been appointed health commissioner of Dorchester.——Dr. Harry H. Nevers, city bacteriologist of Lawrence, has been assigned to act in place of the board of health until such time as the board of aldermen confirm the mayor's appointees as members of the new board.——Dr. Carl E. Meyer has been appointed chief medical inspector of public schools of Chicopee.——Drs. Walter E. Fernald, Waverly, superintendent of the Massachusetts School for the Feeble Minded; Everett Flood, Palmer, superintendent of the Massachusetts Hospital for Epileptics, and Ernest V. Scribner, Worcester, superintendent of the Worcester Insane Asylum, have been appointed members of the state commission to investigate the increase of criminals, mental defectives, epileptics and degenerates.——Dr. William J. Brown, head of the south department of the Boston City Hospital, has resigned.

MICHIGAN

Will Erect Sanatorium.—The Ann Arbor Antituberculosis Society has leased seven acres on the outskirts of the city for a term of five years and will erect a tuberculosis sanatorium on this site.

Physician Loses Suit.—In the case of Dr. James E. Taylor, Ovid, who sued the Detroit, Grand Haven and Milwaukee Railroad for $10,000 for injuries alleged to have been sustained in an accident recently, the judge directed a verdict of no cause of action.

Medical Society Wants Building.—The membership of the Wayne County Medical Society has actually taken up the formulation of plans for a building for the exclusive use of the society, to cost $50,000. Thus far about $30,000 has been pledged.

County Society Meeting.—At the annual meeting of the Benzie County Medical Society, held at Benzonia, April 20, Dr. James E. Peltier, Thompsonville, was elected president; Dr. Charles P. Doyle, Frankfort, vice-president; Dr. Edward J. C. Ellis, Benzonia, secretary-treasurer, and Dr. Gerald O. Edmunds, Honor, delegate to the state society.

Personal.—Dr. William F. Metcalfe, Detroit, returned from Europe April 25.——Dr. Roy C. Perkins has resigned as health officer of Bay City, and has been succeeded by Dr. Lewis C. Hammond.——Dr. Frank W. Martin has been elected president of the Portland Antituberculosis Society.——Dr. Peter D. MacNaughton, for nine years health officer of Calumet, has resigned.

MONTANA

Personal.—Dr. Arthur Morrow, Kalispell, announces his retirement from practice.——Dr. Roy E. Seitz, Musselshell, has moved to Roundup, and will be surgeon to Mine No. 2 in that place.——Dr. Howard C. Randolph, assistant surgeon of the Northern Pacific Hospital, Missoula, has resigned and gone to Aberdeen, Wash.——Dr. Carl H. Horst has succeeded Dr. John B. Sullivan as city physician of Butte.

Society Meetings.—At the recent meeting of the Yellowstone Valley Medical Society, held in Billings, the following officers were elected: President, Dr. William G. Richards, Hardin; vice-president, Dr. James D. Barrett, Billings; secretary, Dr. E. G. Nelson, Billings; treasurer, Dr. Carl Shulin, Billings, and delegate to the state society, Dr. Henry E. Armstrong, Billings.——At the annual meeting of Gallatin County Medical Society, held in Bozeman, Dr. Joseph Piedalue, Bozeman, was elected president; Dr. Albert D. Brewer, Storrs, vice-president; Dr. Cornelius B. Boyle, Bozeman, secretary and delegate to the state society; and Dr. James E. Ragsdale, Bozeman, treasurer.

NEBRASKA

Physician Wins Suit.—In the suit instituted by Ella Guard against Dr. Paul H. Ellis, Omaha, in which $25,000 damages was asked on account of alleged malpractice, a verdict for the defendant was returned April 16.

Elections in County Societies.—Burt County Medical Association met at Craig, April 9, and elected Dr. William C. Keettel, Lyons, president; Dr. Axel E. Hedlund, Oakland, vice-president; and Dr. Merrit Wood, Tekamah, secretary-treasurer. The question of fees was discussed and an increase decided on.——Fillmore County Medical Society met at Geneva, March 29, and elected the following officers: Dr. Frederick L. Beck, president; Dr. Royal Woods, vice-president; Dr. Joseph Bixby, secretary-treasurer; Dr. Morgan Propst, censor, all of Geneva; and Dr. Frederick L. Beck, delegate to the state medical society to meet in Lincoln May 10-12, and Dr. V. V. Smrha, Milligan, alternate.

NEW HAMPSHIRE

Personal.—Dr. Harold Palmer, Plymouth, has located at Rumney.——Dr. G. M. Sullivan has opened an office at Derry.——Dr. Robert F. Oliver, Alstead, has opened an office at Enfield.——Dr. Gardner N. Cobb of White River Junction, Vermont, has removed to West Lebanon.

Bequests.—By the will of the late Mrs. Elvah G. Mann, $10,000 is bequeathed to the Concord City Hospital.——The late Albert C. Buzzell, Exeter, in his will, bequeathed $10,000 to the Boston Floating Hospital, and railway shares valued at $20,000 to the Exeter Cottage Hospital.

NEW JERSEY

Hospital Bed Endowed.—Muhlenberg Hospital, Plainfield, has received a bequest of $5,000 from the estate of Arthur W. Talmadge to endow a bed in perpetuity.

Personal.—Dr. Peter J. Zeglio, Plainfield, has been appointed attending surgeon of the Muhlenberg Hospital, vice Dr. Monroe B. Long, deceased, and Dr. William H. H. Anthony has been appointed attending physician.

Osteopath Bill Vetoed.—The bill passed by the State legislature regulating the practice of osteopathy and giving the osteopaths one member on the Board of the State Medical Examiners, was vetoed by Governor Fort, April 16.

County Society Meetings.—Camden County Medical Society, at its annual meeting, April 26, is reported to have adopted resolutions condemning Governor Fort for his action in regard to the bill, introduced by Dr. Ramsey, and known as the Assembly bill to regulate the practice of medicine. Dr. Joseph B. Baer was elected president; Dr. A. Haines Lippincott, vice-president; Dr. Daniel Strock, secretary; Dr. Alexander S. Ross, assistant secretary; Dr. William H. Pratt, treasurer; Dr. Henry H. Sherk, reporter; Dr. Alfred Cramer, Jr., *historian*; Dr. Joseph L. Nicholson, censor; Dr. Edmund L. B. Godfrey, trustee; all of Camden; William A. Westcott, Berlin, William I. Kelchner, Camden, and John K. Bennett, Gloucester City, delegates to the Medical Society of the State of New Jersey.——At the annual meeting of Somerset County Medical Society, held in Somerville April 14, Dr. Claudius R. P. Fisher, Boundbrook, was elected president; Dr. Josiah Meigh, Bernardsville, vice-president; Dr. Francis DuBois, North Plainfield, secretary; Dr. Thomas H. Flynn, Somerville, treasurer; Dr. William H. Long, Jr., Somerville, reporter; Dr. Howard L. Kaucher, Boundbrook, censor, and Dr. Arthur H. Dundon, North Plainfield, delegate to the state society.——At the annual meeting of Cumberland County Medical Society in Bridgeton, April 12, Dr. Alfred Cornwell, Bridgeton, was elected president; Dr. Charles W. Wilson, Vineland, secretary; Dr. Joseph Tomlinson, Bridgeton, treasurer, and Dr. John H. Moore, Bridgeton, reporter.

NEW MEXICO

Additional Appropriation for Sanatorium.—The secretary of war has recommended to congress an appropriation of $65,000 to construct a water works system for the army sanatorium for tuberculosis at Fort Bayard.

New Hospital.—The contract for the erection of the Deming Ladies Hospital has been let. The building will be located on Copper avenue; will be of brick, 36 by 24 feet; two stories and basement, with six rooms for patients on each floor.

Personal.—Dr. Robert Smart, Albuquerque, formerly captain in the Medical Corps, U. S. Army, has been appointed surgeon of the National Guard of the territory.——Dr. Homer H. Dally, Folsom, who has been ill in the hospital in Trinidad, is reported to be improving.

NEW YORK

Personal.—Dr. Roswell Park, Buffalo, was taken ill with pneumonia, while en route from his home to Washington, April 30, and is reported to be seriously ill in the New York Hospital.

Insurance Company to Establish Sanatorium.—The Metropolitan Life Insurance Company has purchased 225 acres of land in Summers Center, West Chester county, where it will erect a sanatorium for its employés infected with tuberculosis. The company announces that it has appropriated $100,000 for its tuberculosis work.

Appropriation for Letchworth Village.—Governor Hughes has signed the bill appropriating $179,000 for the beginning of construction of Letchworth Village, the new state institution at Thiells for the care of epileptics and idiots. Of this appropriation $65,000 is available immediately and the remainder on October 1.

Lectures for Health Officers.—A course of lectures, laboratory exercises and demonstrations have been arranged for the health officers of New York State. The first course will be given in Albany during the week beginning May 9. The course will begin with introductory work at the State Hygienic Laboratory and morning and afternoon sessions will be held throughout the week. There will be no charge for instruction or for laboratory apparatus.

Public Health Meeting.—The Rochester Public Health Association held a mass meeting April 22, at which about 1,500 were present. The chief speakers were Drs. John H. Lowman, Cleveland, and S. Adolphus Knopf, New York City, and Rev. Clarence A. Barber.——On April 30 a vaudeville was given by the Ad Club at the Lyceum Theater, Rochester, the proceeds of which were devoted to the warfare against tuberculosis.——On April 24, Dr. Montgomery E. Leary delivered an address on the Crusade Against Tuberculosis in the Lake Ave. Baptist Church, Rochester.

Municipal Health Problems.—A conference of the chief magistrates and other officials of second and third class cities of the state will be held in Schenectady June 9 and 10. Among the subjects to be discussed are the following:

1. Municipal Hospital Care of Contagious Diseases.
2. Municipal Duties in the Conquest of Tuberculosis.
3. The Housing Problem and Health.
4. The Prevention of Disease by the Elimination of Dust—Modern Methods of Street Cleaning, and the Care of Public Buildings, Including Proper Ventilation.
5. What the Small City Can Do to Protect the Food Supply of Its People.
6. The Organization and Work of an Effective Health Department.
7. The Protection of Life vs. the Protection of Property—The Health Inspector, the Policeman, and the Fireman.
8. Where Shall We Get the Money for Municipal Health Activities?

New York City

The Polyclinic Purchases Property.—The New York Polyclinic School and Hospital has purchased another dwelling adjoining the ten other houses on West 50th street which the institution has recently purchased as a site for a new building.

Osteopath Denied Writ of Mandamus.—A decision has been handed down by the Appellate Division of the Supreme Court in Brooklyn upholding a refusal to grant a writ of peremptory mandamus to an osteopath who is seeking to force the Board of Health and the Coroner to accept death certificates signed by him.

Physician Wins Suit.—On the ground that a coroner's physician is a deputy coroner, with quasi-judicial powers, Judge Bijur, on April 7, dismissed the suit of Mary Hasard, who sued to recover $10,000 from Dr. Timothy D. Lehane, alleging that after an autopsy on her son, who was killed in an accident, Dr. Lehane had retained the heart and spleen of the deceased.

Personal.—Dr. James J. Walsh, dean of Fordham University Medical College, was the guest of honor at the nineteenth anniversary dinner of the New York Celtic Medical Society.——Dr. Eugene Hodenpyl is ill with pneumonia.——Dr. and Mrs. Charles H. Archibald and Dr. Daniel F. Linehan have sailed for Europe.——Dr. George C. Jeffery, Brooklyn, has been elected consulting surgeon of the Cumberland Street Hospital.

Hospital Loses Public Aid.—The aid which the city gives to hospitals on the recommendation of the State Board of Charities has been withdrawn temporarily from the Williamsburg Hospital because of the alleged unsatisfactory condition of the building which it now occupies. Plans have been prepared for a new building on the plot adjacent to the present one and ground will be broken as soon as sufficient funds have been secured.

Brooklyn Asks for Bacteriological Laboratory.—The President of the borough of Brooklyn requested Health Commissioner Lederle to attend a meeting of the Kings County Medical Society recently where the administration of the Health Department of Brooklyn was discussed. A very strong plea was made for the establishment of a bacteriological laboratory in that borough. It is claimed that the delay encountered in sending cultures to New York for examination is a serious handicap, and that the results of this delay are especially dangerous in diphtheria.

Hospital Changes.—The following changes and appointments have been made in the staff of Mount Sinai Hospital: Dr. Herbert L. Celler has been appointed assistant adjunct visiting physician; Dr. Reuben Ottenberg, assistant in clinical microscopy; Dr. Israel Strauss, assistant adjunct visiting neurologist; Dr. Harold Neuhof, adjunct admitting physician, and Dr. Julian J. Meyer, assistant adjunct admitting physician.——The George Blumenthal, Jr., Fellowship for 1910 has been awarded Dr. Albert A. Epstein, assistant in the department of physiologic chemistry.

Graduate Course on Tuberculosis.—A clinical course in pulmonary tuberculosis is offered to graduates in medicine, to be given at Bellevue Hospital on Monday, Wednesday and Friday afternoons for four weeks, beginning May 8. The course will be in charge of Dr. James A. Miller, director of the tuberculosis clinic and will consist of twelve clinics and lectures on the more important and modern problems of tuberculosis, together with opportunity for the individual examination and study of a large number of patients. Information regarding the course may be obtained from the registrar of the College of Physicians and Surgeons, 437 W. 59th street.

Hospital Fund Divided.—The distributing committee of the Hospital Saturday and Sunday Association has decided to apportion the collection which amounted to $76,000 as follows: Montefiore Home and Hospital for Chronic Invalids, $7,600; Mount Sinai Hospital, $7,550; St. Luke's Hospital, $3,385; Orthopedic Dispensary and Hospital, $4,253; the German Hospital, St. Mary's Free Hospital for Children, Roosevelt Hospital, the Ruptured and Crippled Hospital and the New York Infant Asylum each received over $3,000; the Lying-In Hospital, the Post Graduate and Lebanon Hospital each received over $2,000. Many other institutions received sums ranging from $2,000 to $250.

NORTH CAROLINA

Personal.—Dr. Carl V. Reynolds and Jere E. Cocke have succeeded to the work of the late Dr. James A. Burroughs, Asheville, in the treatment of pulmonary diseases.——Dr. Edward J. Wood, Wilmington, has been elected president of the Medical Society of the State of North Carolina to fill the unexpired term of Dr. James A. Burroughs, deceased.

Decision Regarding Unlawful Sale of Cocain.—The Supreme Court handed down a decision on April 21 affirming the right of the State Board of Pharmacy to refuse license to a druggist convicted of unlawful selling of cocain in the case of Thomas vs. N. C. State Board of Pharmacy. Thomas was a druggist at Thomasville and was indicted in the Superior Court for selling cocain without a physician's prescription. He pleaded guilty in the several cases against him and was fined by the trial judge. N. C. State law requires the annual renewal of all druggists license by the State Board of Pharmacy. Shortly after his conviction Thomas applied to the State Board of Pharmacy for the renewal of his druggist's license, tendering the usual fee. The board refused to issue him a license and a writ of mandamus was brought to compel the State Board of Pharmacy to issue him license which being heard in the Superior Court was decided in favor of the Board. Appeal being taken to the Supreme Court decision is made in favor of the Board of Pharmacy. In delivering the opinion Chief Justice Clark says:

"The selling of drugs is an important matter to the health and lives of the public. The Legislature has carefully guarded it, by the provisions to be found in Revisal 4471-4490. The sale of cocain and other deleterious drugs is the subject of carefully drawn provisions. The plaintiff (Thomas) knew that the violation of these provisions subjected him to fine and imprisonment in the discretion of the court, and to a revocation of his license—the latter not being discretionary, but the necessary result of his conviction. The evidence was so clear that the plaintiff pleaded guilty, and the facts found by his honor show a case of great turpitude, yet the plaintiff (Thomas) in less than ten days thereafter, applied for license and contends that the payment of $2.00 entitles him to resume the important business of selling drugs."

Briefly speaking, the Supreme Court decides that if a druggist is convicted of unlawfully selling cocain and is a licensed druggist, that the Board of Pharmacy must refuse his renewal of license. Thus ends a hard-fought contest in favor of the powers of a State Board.

OHIO

State Association Meeting.—The annual meeting of the Ohio State Medical Association will be held in Toledo, May 10-12.

Patients Transferred to Tents.—On April 26, the 120 tubercular patients of the Columbus State Hospital were transferred to tents, in which they will live until late in the fall.

Licenses Revoked.—The State Medical Board, on April 5, is said to have revoked the certificates to practice of E. J. Rose, Toledo, and Morton G. Lambright and B. F. Ivy, Cincinnati.

Tuberculosis Dispensary Opened.—A public dispensary for the issuance of information, and aid in the suppression of tuberculosis has been opened in the office of the Charity Organization Society, Youngstown. The medical committee in charge is composed of Drs. Raymond E. Whelan, Colin R. Clark and Harry E. Welch. The dispensary will be open on Tuesdays and Fridays between 4 and 5 p. m.

Medical Library Association Started.—It has been decided by the Allen County Medical Association to establish a medical library in the rooms of the association at the Lima Hospital. The association has a membership composed of physicians, dentists and laymen and the membership fee is to be employed in purchasing books and subscribing for medical publications recommended by the committee.

Personal.—Dr. Ezra B. Heistand, Kenton, the oldest practitioner of Hardin county, entertained the medical profession of the county, April 23, at a dinner in honor of his eightieth birthday anniversary.——Dr. K. H. Yeretzin of the staff of St. Francis Hospital, has been made night physician at the Columbus State Hospital.——Dr. Alvin C. Lee, Mansfield, has retired from practice and will move to Tiffin.——Dr. John C. Martin, Findlay, has been appointed special examiner for the pension department.——Dr. Thomas G. Gordon, New Philadelphia, is reported to be critically ill with uremia.——Dr. Cornelia B. Kennedy, Findlay, has resigned as physician to the Girls' Industrial Home, Delaware, and will locate in Akron. ——Dr. Charles Graefe has been appointed a member of the board of health of Sandusky.——Dr. Benjamin F. Hawn, Youngstown, is reported to be seriously ill.

PENNSYLVANIA

Personal.—Dr. Harry E. Kilgus, St. Mary's, returned from Europe April 26.——Dr. William E. Wright, Harrisburg, who was operated on for appendicitis recently, is convalescent.—— Dr. Abraham N. Fretz, Fleetwood, is reported to be critically ill.——Dr. Henry C. Earnshaw has been appointed surgeon for the Pennsylvania System at Bryn Mawr.

Tuberculosis Sanatorium.—Plans for the buildings of the new State Tuberculosis sanatorium at Cresson are nearing completion. The necessary clearing is being done on the Carnegie tract and there will be plenty of timber and stone on the ground for all the buildings. A number of tests have shown the water supply to be of the purest.——Mrs. B. F. Jones, Pittsburg, has given her cottage at Cresson to the State Department of Health for the use of the Sanatorium.

Philadelphia

Bequests.—The will of the late Harriet Abbey bequeaths to the Episcopal Hospital $10,000 to endow two free beds, and to the Home for Incurables $5,000 to endow a free bed.

To Enlarge Orthopedic Hospital.—A three-story ward building, 34 by 122 feet, is to be built by the Orthopedic Hospital adjoining the present buildings of the hospital. Work on the addition will begin immediately.

Cocain Peddler Fined and Imprisoned.—Pleading guilty to unlawfully selling cocain, Abraham Hall, a negro, was sentenced by Judge Carr to the penitentiary for "not less than six months or more than two years" and to pay a fine of $500.

Class Reunion.—The class of 1900, Jefferson Medical College, will hold a reunion on June 3, 1910. As the addresses of some members are not known, those who do not receive a circular letter are earnestly requested to immediately send their names and addresses to Dr. Allen G. Ellis, Jefferson Medical College.

Personal.—Dr. Howard S. Anders has resigned his position as chief in the tuberculosis department at the Philadelphia General Hospital.——Dr. Barton H. Potts, chief of the Nose and Throat Department of the German Hospital, is confined to his bed, suffering from a breakdown due to overwork.—— Dr. Henry M. Fisher sailed for Europe April 27.

Trachoma Institute Established.—To treat immigrants suffering from trachoma free of charge and give them a chance of being cured instead of being immediately transported, the Trachoma Institute was formed, April 27, at the office of Dr. Aaron Brav and the institute will apply for a charter. Dr. B. S. Krisher was elected secretary and Dr. Aaron Brav, chief of the medical staff.

Class Reunion and Banquet.—On April 27, the twenty-fifth anniversary of the class of 1885, Jefferson Medical College, was celebrated by a reception to the members and their wives. Dr. J. Chalmers DaCosta entertained the class at luncheon at the college at noon on April 28, and that evening a banquet was held. Dr. Joseph D. Orr, of Leechburg, Pa., president of the class, acted as toastmaster.

Meeting of the Physicans' Motor Club.—The regular monthly meeting and smoker of the Physicans' Motor Club was held at the Hotel Walton, April 26. Mr. F. Wilkie, prominent in automobile circles, spoke to the members on "The Anatomy, and Physiology of Transmissions, Gears and Differentials." The run to Valley Forge, Pa., which was delayed on two occasions on account of rain, was made Sunday afternoon, May 1.

Typhoid Decreases.—Dr. Neff, head of the Department of Health and Charities, in his weekly report of transmissible diseases, announced that there were but 9 cases of typhoid fever in the city during the week ending April 30. This is the smallest number reported during any one week in the history of the department. The month of April showed but 71 cases, which is the lowest monthly record of the Health Department. In April, 1907, there were 500 cases; April, 1908, 368 cases, and in April, 1909, 124 cases.

Pure Food Prosecutions.—Three cases of food adulteration prosecuted by the State Dairy and Food Commission, were heard before Magistrate Beaton, April 29. All the defendants were held for court after agents of the commission had testified against them.——Lewis Weinfeldt, a baker, was held because it was testified that sponge cake made by him had been found to contain coal tar coloring on examination by Dr. C. H. LaWall, chemist.——William Rohlbach, brewer and bottler, was charged with selling "Jellyfoam," a preparation used to cause bubbles in soda water and also with the sale of "Dublin Ginger Ale Extract," which contains capsicum to give the drink pungency. The "Jellyfoam" contains saponin.——I. Geller was held on the charge of wholesaling sponge cakes, containing coal tar coloring.——A notable victory was achieved by Harry P. Cassidy, special agent of the State Dairy and Food Commission, when Jacob D. Weiss, butter and egg dealer, was convicted before Judge McMichael, April 26, of selling rotten eggs. Sentence was deferred by the judge until the defendant can be tried on two more charges. The penalty is a fine of $200 to $1,000 and from three to nine months' imprisonment.

Philadelphia Special Train to St. Louis.—The following notice is received too late for inclusion in its proper place in the front part of this issue: The Pennsylvania Railroad has organized a special train to St. Louis, leaving Broad Street Station, Sunday, June 5, at 1:10 p. m., and arriving in St. Louis June 6, at 1:25 p. m. New York members may take this train at the West Twenty-third Street station at 10:55 a. m.; Pennsylvania members at Harrisburg, Sunday, at 3:35 p. m., at Altoona at 6:40 p. m., or at Pittsburg at 8:35 p. m. (central time). This is a solid Pullman electric-lighted train of highest possible equipment, has a club car with a barber, valet and manicure, also a stateroom observation car. A dining car will serve all meals. The train is an exact counterpart of the Pennsylvania eighteen-hour special. Arrangements will also be made to have a special train for the return trip, leaving St. Louis Friday, June 10, at 1:02 p. m., and arriving at Philadelphia Saturday at 3:20 p. m. Those who take the outward train need not return on the special, as their tickets will be good for any other train on which no special fare is charged. On account of the American Medical Association, the round trip can be made for one and one-half fares, $34.15, exclusive of sleeping-car accommodations; and the return ticket is good until June 20. Those who desire to take this train should communicate at once with William Pedrick, Jr., District Passenger Agent, P. R. R., 1433 Chestnut St., Philadelphia. Ophthalmologists will please specify "ophthalmology car."

SOUTH CAROLINA

Medical Secretaries Meet.—The South Carolina Medical Secretaries Association met in Laurens April 20, and elected the following officers: Dr. Claude C. Gambrell, Abbeville, president; Dr. Mary R. Baker, Columbia, vice-president, and Dr. L. Rosa H. Gantt, Spartanburg, secretary-treasurer.

Personal.—Dr. Carlisle Johnston, St. George, while leaning from the step of a passenger car, came in contact with a post and was thrown from the car, dislocating both shoulder blades. ——Dr. J. LaBruce Ward, Georgetown, has been appointed assistant to Dr. C. Frederick Williams, Columbia, state health officer, and will have charge of the hookworm campaign.

State Society Meeting.—At the sixty-seventh annual meeting of the South Carolina Medical Association, held in Laurens April 20-22, under the presidency of Dr. John L. Dawson, Charleston, the following officers were elected: President, Dr. James H. McIntosh, Columbia; vice-presidents, Drs. J. Wilkinson Jervey, Greenville; Rufus B. Epting, Greenwood, and Rolfe E. Hughes, Laurens; secretary, Dr. Edgar A. Hines, Seneca; treasurer, Dr. Charles P. Aimar, Charleston; and delegates to the American Medical Association, Dr. John L. Dawson and Dr. Edgar A. Hines. The association endorsed the proposed legislation for the inspection of medical schools, the president's appeal for legislation requiring better preliminary education of applicants to practice medicine, and Senator Owen's bill for the national department of health.

TEXAS

State Medical Society.—The forty-second annual meeting of the State Medical Association of Texas will be held in Dallas May 10, 11 and 12, under the presidency of Dr. Witten B. Russ, San Antonio.

Personal.—Dr. Ira C. Herrington, Orange, has been appointed local surgeon for the Gulf, Colorado and Santa Fe Railway. ——Dr. Herbert E. Stevenson, El Paso, has built a laboratory for the use of himself and medical friends for research work.

Commencement Exercises.—The eighth annual session of the Southwestern University Medical College closed April 28. The faculty address was delivered by Dr. James H. Black, and the baccalaureate address by Rev. D. K. Porter. Dr. Robert S. Hyer, president of the college, conferred the degrees.

Antitoxin at Cost.—The State Department of Health has inaugurated a plan for the distribution of antitoxin at cost to those who are able to pay, and free of charge to the poor and indigent. At least fifteen distributing centers will be established in the state and distribution will be made through local health officers.

Post-Graduate School Incorporated.—The charter of the Dallas Post-Graduate Medical School and Hospital was filed with the state department April 11. The purpose of the corporation is the promotion of the science of medicine in Texas. The incorporators are Drs. Joseph H. Reuss, John M. Neel, Samuel E. Milliken and others.

Society Meetings.—The Physicians' Association of Northwest Texas, at its meeting in Wichita Falls, April 13, elected Dr. Charles H. Harris, Fort Worth, president; Dr. Leopold H. Reeves, Decatur, vice-president, and Dr. Everett Jones, Wichita Falls, secretary. The next meeting will be held at Mineral Wells.——At the annual meeting of Taylor County Medical Society, held in Abilene, April 10, Dr. Franklin E. Haynes, Abilene, was elected president; Dr. Charles T. Scott, Abilene, vice-president; Dr. Manton M. Carrick, Dallas, State Epileptic Colony, secretary-treasurer; Dr. Thomas B. Bass, Abilene, delegate to the state association, and Dr. Franklin E. Haynes, Abilene, alternate.——Denison Medical Society has elected Dr. Alexander W. Acheson, president; Dr. Asahel B. Gardner, vice-president, and Dr. Joseph G. Ellis, secretary.——At a meeting of physicians of Brazoria county, held in Angleton, April 14, a county medical society was organized with an initial membership of 13. Dr. Samuel B. Maxey, Angleton, was elected president.

UTAH

Personal.—Dr. Arthur A. Bird has been elected city physician of Murray, taking the place of Dr. R. R. Kennedy, deceased.——Dr. Jepson has been appointed city physician of Willard.

Hospital Association Incorporated.—The Thomas D. Lee Memorial Hospital Association, organized to build a memorial hospital in Ogden at a cost of $75,000, has filed articles of incorporation.

Modified Quarantine Rules.—Dr. Samuel Paul, health commissioner of Salt Lake, has issued a new set of rules governing contagious diseases. The time of quarantine for scarlet fever has been changed from three to four weeks. This rule has aroused considerable opposition.

Woman's Medical Society.—The women physicians of Utah have organized a Woman's Medical Society with the following officers: President, Dr. Luella P. Miles, Salt Lake; vice-president, Dr. Anna F. Ries, Ogden; secretary-treasurer, Dr. Elsie A. Faust, Salt Lake; and Dr. Martha H. Cannon, Salt Lake, chairman of the credentials committee and advisory board.

WISCONSIN

Sanatorium Needs More Money.—Blue Mound Sanatorium for the Treatment of Incipient Tuberculosis, at its annual meeting, April 23, announced an annual deficit of $2,500. Dr. George W. Morehouse has succeeded Dr. Charles H. Stoddard as physician in charge, and Drs. Gilbert E. Seaman and Arthur J. Patrick, Milwaukee, have been reelected directors.

Personal.—Drs. R. B. Clark and S. B. Soseman have been elected members of the board of health of Monroe, and Dr. W. B. Ganzi has been elected health commissioner.——Dr. W. H. Brown has been appointed assistant professor of pathology in the State University of Wisconsin, Madison.——Dr. J. B. Spaulding has been elected health officer of Kenosha.——Secretary A. B. Cargill has been placed in charge of the Milwaukee *health department pending the selection and installation* of a commissioner of health.

GENERAL NEWS AND COMMENT

Study of the Feeble-Minded.—The thirty-fourth annual conference of the American Association for the Study of the Feeble-Minded will be held at the Lincoln State School and Colony, Lincoln, Ill., May 16-18, under the presidency of Miss Mattie Gundry, Falls Church, Va.

Asks Appropriation for Cancer Test.—In a message sent by President Taft to Congress April 9, he asks an appropriation of $50,000 for the establishment of a laboratory in which to conduct investigations regarding the cause of cancer, with especial reference to the disease in fishes.

Tropical Medicine.—At the regular session of the Far-Eastern Association of Tropical Medicine, held in Manila March 3, Dr. Gilbert E. Brooke, delegate from the Straits Settlements, Singapore, delivered an address on "Trachoma." The remainder of the session was taken up by the discussion of tropical fevers, including malaria, typhoid, etc.

Insurance Examiners Meet.—The Western Insurance Exchange, made up of medical directors of companies in the American Life Convention, met in St. Louis, and elected Dr. Allison Maxwell of the State Life Insurance Company, Indianapolis, president; Dr. Oscar F. Maxon of the Franklin Insurance Company, Springfield, Ill., vice-president; and Dr. Edgar R. Hawley of the Illinois Life Insurance Company, Chicago, secretary.

Railway Surgeons Meet.—The Association of Surgeons for the Central of Georgia Railway held its annual meeting in Atlanta April 19, under the presidency of Chief Surgeon William H. Elliott, Savannah, in the absence of the president, Dr. John D. Dabney, Birmingham, Ala., who is still ill. Dr. James E. Mangam, Reynolds, Ga., was elected president; Dr. Andrew J. Farley, Leeds, Ala., vice-president, and Dr. Joseph R. Burdette, Tennille, Ga., secretary.

Typhoid Epidemic in Omaha.—During the past winter an epidemic of typhoid fever has prevailed in Omaha, 600 cases with 60 deaths being reported for the first three months of this year. As there was considerable difference of opinion regarding the cause of the outbreak, the governor, at the request of the Omaha Medical Society, asked the U. S. Public Health and Marine-Hospital Service to send some one to make an investigation. Dr. Lumsden was detailed for this purpose and has made a very thorough investigation, if we may judge from Dr. Lumsden's preliminary report, which appears in the Omaha papers April 24. In this report he exonerates the milk and food supply, but demonstrates that the city water was badly infected and was probably the cause of the outbreak. In addition to some sources of investigation on the Nebraska side of the Missouri River, the investigator, by means of a surface and submerged float, was able to trace the path of drainage from the garbage and night soil dumps on the Iowa side and to show that it was carried directly over to one of the Omaha intakes. The report points out a simple method of removing some of the more dangerous sources of infection and outlines a plan for the complete correction of the evils.

LONDON LETTER

(From Our Regular Correspondent)

London, April 23, 1910.

Suicide by Hypodermic Injection of Potassium Cyanid

A new method of committing suicide has been practiced in India. The coroner of Calcutta has had to investigate the case of a medical student who was found dead in bed with the puncture mark of a hypodermic needle in the cardiac region. Close by were a measure glass containing potassium cyanid and an antitoxin syringe. The deceased had recently lost his wife. He left a letter to his brother stating that he had committed suicide by injecting poison, but did not name the drug used. Cyanid of potassium was found in the tissues and blood and hydrocyanic acid in the urine. It is noteworthy that no poison was detected in the viscera (stomach, liver, kidneys or lungs). It is evident that in a case of poisoning by hypodermic injection of potassium cyanid, whether suicidal or homicidal, the poison might not be detected if, as is usual in cases of suspected poisoning, only the viscera were analyzed. This appears to be the first case on record of poisoning by hypodermic injection of potassium cyanid. The rapid elimination of the drug in the urine is of interest.

A Physician's Heroism

A story of great heroism was disclosed at the inquest on two miners who were suffocated in Dudley colliery by poisonous gases. Rescue parties were driven back again and again by the deadly atmosphere of the mine. Dr. Dando went down into the mine, remained there three hours and was overcome by the gas and became unconscious. The coroner said that more heroic conduct was not possible on the battlefield, where sometimes men did things they would not do under less exciting circumstances.

The Compulsory Notification of Epizootic Diseases

The government has issued an important order under the Diseases of Animals Act rendering compulsory notification of the most important diseases of domestic animals—cattle plague, pleuropneumonia, foot-and-mouth disease, sheep-pox, sheep-scab, swine fever, anthrax, epizootic lymphangitis, rabies, glanders and farcy. Every veterinary surgeon who examines an animal or the carcass of animal must, if he suspects that one of the above-mentioned diseases exists, notify an inspector. He must also notify a policeman, who must transmit the information by telegram to the board of agriculture. The board has been carrying on a very energetic campaign against epizootic disease and has already stamped out of Great Britain five of these diseases—cattle-plague, contagious pleuropneumonia of cattle, epizootic lymphangitis and rabies. In the case of anthrax, glanders and farcy (diseases which affect man) the inspector must notify the local health officer.

The Struggle Against Trachoma in Egypt

For centuries trachoma has been a scourge of Egypt and has caused an enormous amount of blindness—hence its name, Egyptian ophthalmia. Among the many beneficial results of the British occupation is an attempt to repress this dire malady, which is almost universal in the lower and middle classes: According to the census of 1907 more than half a million Egyptians are blind in one or both eyes, and it is thought that this number is under the mark owing to a reluctance to declare personal or family infirmities. Those blind in one eye form 3.2 per cent. of the population and those blind in both eyes 1.2. In 1903 Sir Ernest Cassel, a well-known philanthropist, presented $200,000 for the relief of ophthalmia in Egypt. Two movable ophthalmic hospitals were formed and placed under the control of Mr. A. F. MacCallan, an ophthalmic surgeon. They consisted of a dozen large Indian tents with the necessary equipment and a complete set of ophthalmic instruments. Attached to them are two Egyptian surgeons with the necessary attendants, and servants. Accommodation is provided for 12 in-patients, but the greater part of the work consists in the treatment of out-patients, of whom about 300 attend daily. A camping ground is selected in or near a town and occupied for about six months. Then the hospital is transferred to another place. So vast is the amount of work to be done that the site is changed, not because there is any diminution in the number of patients, but because it is thought fairer to give the different provinces a turn. The movement started by Sir Ernest Cassel is extending. Seven years ago little was done for ophthalmic patients; there were no ophthalmic surgeons of repute outside Cairo and Alexandria. Now the traveling hospitals have aroused interest in the country and the Egyptian public has subscribed $50,000 for building purposes, to which the government has added $75,000, and $25,000 a year for maintenance. Three permanent ophthalmic hospitals are now in course of construction.

An Anesthetics Museum

The officers of the anesthetics section of the forthcoming annual meeting of the British Medical Association have decided on a novel feature. Under the auspices of the medical museum committee there will be an exhibition of past and present anesthetic apparatus and appliances. A special committee has been appointed to select from the vast number of modern anesthetic appliances those which are worthy of exhibition.

The Prone-Pressure Method of Artificial Respiration

In The Journal, Sept. 5, 1908, p. 801, Prof. Schäfer described a new method of artificial respiration which a committee of the Royal Medical and Chirurgical Society (of which he was chairman), appointed to investigate the efficiency of various methods of artificial respiration, recommended on the basis of experiments made on the passive living subject and on dogs. Prof. Schäfer showed that under these circumstances a greater air exchange was obtained than under the older methods of Silvester, Marshall, Hall and Howard. Being simple and easily learned, he thought the method was always indicated in cases of drowning. In Great Britain it has displaced the older methods in the teaching of the Royal Humane Society (a society which instructs the public in methods of resuscitation). But some authorities, notably Prof. Keith, were not sure that the evidence was strong enough for the supression of the older methods. Indeed, this distinguished anatomist described the adoption of the method by the society as an experiment on a large scale on supposedly drowned individuals. The method was also adopted by the London police. The report of their chief surgeon, Mr. Clinton Dent, which has been just published, is the first clinical evidence of any amount on the subject. So far as figures can, it bears out the efficacy of the method. During the 12 months ending Jan. 31, 1910, artificial respiration was employed by the police in 48 cases. In 34 of these the Schäfer method alone was used; 25 of these were cases of immersion and in 18 the method was successful. In 9 cases other than immersion it was successful in 6. It appears established that the method is efficacious in the hands of those without special medical training, and that it is applicable to children. In 13 of the cases the subjects were under the age of 10, and 10 of them recovered. In one successful case, in which it appeared that death had occurred before the method was adopted, it was observed that the air expelled was sufficient to blow out a lighted match. In another failure both lungs were found postmortem "distended to the fullest extent." One policeman said that he had found the method most efficient and superior to the old method.

PARIS LETTER

(From Our Regular Correspondent)

Paris, April 22, 1910.

International Office of Hygiene

The Committee of the International Office of Public Hygiene has just held a meeting in Paris. Nineteen powers were represented there, namely, Belgium, Brazil, Bulgaria, Egypt, Spain, the United States, France, Great Britain, India, Australia, Italy, Mexico, Peru, Persia, Russia, Servia, Sweden, Switzerland and Tunis. At this meeting the delegates examined the various questions pertaining to the extermination of rats, especially that of the adoption of international regulations requiring the periodical extermination of rats on merchant ships. They also took up the question of the basis for an international agreement bearing on the unification of methods of titration now applied to the preparation of antidiphtheritic serum. They also examined the question of weekly statistics on epidemic and transmissible diseases and the disinfection of water taken on to insure the stability of "water-ballast" ships.

Disturbances at Dr. Doyen's Lecture

Dr. Doyen was recently authorized by the council of the University of Paris to give an unofficial course on surgical anatomy in its relation to operative technic. The announcement of this course, the first lesson in which was to have been given April 18, attracted a considerable attendance from the college of medicine. A great many of the students came, however, only for the purpose of making a hostile demonstration and of preventing the celebrated surgeon from speaking; they created such a disturbance that Dr. Doyen had to withdraw at the end of an hour without having been able to begin his lecture. Consequently, the dean of the college of medicine decided to suspend this open course provisionally.

Dr. Doyen believes that this hostile manifestation was instigated by some *agrégés* of the college of medicine. Moreover, several students feel that he attempted to throw discredit on the medical profession at a lecture on the "Malade Imaginaire" which he had given some days previously at the Odéon Theater, in which he compared certain physicians of the present day to the physicians of Molière. At all events Dr. Doyen intends to give his course in a private hall, and he will take all necessary measures to avoid fresh disorder.

Association of Women Students

The women students of the University of Paris have just organized themselves into an association for the purpose of giving facilities to its members in their studies and of organizing an employment bureau.

A Gift Refused by the Government

Eighteen months ago the Paris college of medicine received a gift of about $4,000 (20,000 francs) to be offered for certain works on homosexuality, which were to show that this abnormal instinct constitutes a disease and makes those who are afflicted with it suffer greatly. The college accepted the gift and the conditions. The government has just decided that the gift must be rejected.

Association for the Benefit of the Blind

It appears from the report read at the last general assembly of the Association Valentin-Haüy pour le bien des aveugles that during the year 1909 there were 491 new blind beneficiaries of the association. The most interesting work of the association is the Braille library, named after the inventor, consisting of volumes printed in raised points, by the industry of fifteen hundred persons scattered over the whole of France. During 1909 this library was increased by 1,921 volumes, which makes 26,000 altogether. There are 40,000 volumes annually in constant circulation, not only in Paris but in the provinces, where fifty-five branches are in regular operation.

Election of Two Foreign Correspondents to the Academy of Medicine

In its session of April 19 the Académie de Médecine elected two foreign correspondents in the section of surgical pathology and obstetrics, Professors Pestalozza of Rome and Martin of Geneva.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, April 21, 1910.

Personal

Professor Lenhartz, the well known director of the Hamburg hospital, died unexpectedly April 20. While it was known that he was suffering from pernicious anemia and that there was scarcely any hope of recovery, his death occurred suddenly. Lenhartz was a pupil of the Leipsic clinician, E. Wagner, and had received general recognition as an able clinician, both through his work in the clinic and his literary efforts. His text-book "Mikroskopie und Chemie am Krankenbett" has passed through many editions, and his contributions to Nothnagel's Special Pathology and Therapy and to the Handbook of Practical Medicine by W. Ebstein and J. Schwalbe have received very favorable notice.

Jubilee of Robert Koch

On April 8, twenty-five years had passed since the appointment of Robert Koch as professor of hygiene in the Berlin university. Five years previously he had been called from Wollstein to Berlin as a member of the imperial health office. He continued in this position on partial service after he became professor. Koch began his academic work in 1885 by conducting the practical courses in the hygienic laboratory on Kloster street, giving a three hours' course on hygiene and a one hour course on methods of bacteriologic examination. On Nov. 3, 1885, he gave his first lecture, in which he illustrated by various examples the value of hygiene for all departments of medicine. Koch carried on the duties of a university teacher, which he found burdensome, for only five years. In 1890 he resigned his professorship and undertook the direction of the newly founded Institute for Infectious Diseases. He remained in the faculty as an honorary professor. Rubner succeeded him as the regular professor of hygiene. Unfortunately a few days after this twenty-fifth anniversary Robert Koch suffered a severe attack of angina pectoris which very greatly endangered his life. Although at present he is satisfactorily improving, all anxiety as to the recurrence of such an attack has not disappeared for he has suffered from arteriosclerosis for a number of years.

The Virchow House

As I have previously mentioned, the Berlin medical society desires to build the contemplated Virchow house in conjunction with the German surgical society. The latter society at a general meeting on the occasion of the recent annual session voted to give the executive committee full power to sell the Langenbeck house and to acquire a new plot of ground, either for itself or in combination with the Berlin medical society. There is hope therefore that the contemplated arrangement will be made and the proposed building erected in common.

The "Puro" Trial

The suit against the manufacturer of the meat extract, "puro," to which I have previously referred, has taken on a new phase. The imperial court, on an appeal of the convicted manufacturer, has reversed the verdict and remanded the case to the county court at Munich. The imperial court is of the opinion that the judges erred in their decision with reference to the property damage. A property damage could not be produced if the price of a remedy can be considered as entirely proportionate to the favorable action of the preparation. It was sufficiently shown by the fact that many physicians had ordered the puro preparation for many years with good results for their patients, and that the price of the preparation must be regarded as entirely suitable in consideration of this action and in comparison with other similar preparations. If this view of the imperial court has weight with the judges at the new trial, as is to be expected, the manufacturer will either be acquitted or be let off with a light fine. This can make no difference with the estimation of his proceeding by physicians, for the fact is that the manufacturer has given a false composition for his preparation and thereby has deceived both the medical and the lay public.

Night Rest Secured for Pharmacists

The pharmacists have been endeavoring to secure night rest at times as they have Sunday rest. A few days ago permission was given by the police department of this city to three pharmacists to close their pharmacies alternately at night, in such a manner that of the three pharmacists only one will offer night service each week. The pharmacies furnishing night service, as well as others that are open in the neighborhood, will be indicated on a plain sign at the closed pharmacy.

Smoking to Be Allowed in Dining Cars

Some two years ago smoking was forbidden in the dining cars, not only during meals, but also in the intervals. This order roused a storm of protest by the smokers. The prohibition has heretofore been strictly maintained in view of the interest of patients who use the dining cars. Now, however, the general management of the Baden railroad announces that the prohibition will be removed May 1 on the railroad lines in that country.

Monument for Professor von Renvers

A call for contributions for the erection of a monument for the late Professor von Renvers, who was much beloved, has been issued. Any surplus is to be devoted to a Renvers foundation for the Moabit hospital, of which he was the director of the department of internal medicine.

Cerebrospinal Meningitis in the Bavarian Army

The authorities have ordered that the entire body of troops at the Munich garrison shall be investigated to determine whether they are not unconscious carriers of the germs of cerebrospinal meningitis. In view of the large number to be examined (about 10,000 men), the investigation will require a number of months. The director of the hygienic department of the military medical school is charged with the carrying out of the investigation and is to be provided with a number of sanitary officers who are trained bacteriologists. As it has been shown that the germs of this disease settle on the mucous membrane of the throat and may remain there for many months, even more than a year, without producing any positive disease, the appropriate means of investigation is the examination by bacteriologic, cultural and serodiagnostic methods of the mucus of the nose and throat. In order to discover the germs of infection, the military medical school, in March of last year, when the cases began to multiply, began so-called environment examinations among the healthy men of the garrison, and especially of the two regiments particularly affected with cerebrospinal meningitis. Up to March 1 of this year more than 3,400 examinations had been undertaken, involving 2,763 persons. These examinations revealed altogether 52 cocci carriers. Moreover, there was found in one company a chain of infection including four patients and eight carriers, which had its origin in the civil population. The relations between diseases in the garrison and in the city form generally a notable factor in the conveyance of disease to the personnel of the army. The principal aim of the investigation is of a prophylactic character, viz.: to render the cocci carriers harmless by appropriate treatment and so to prevent the further spread of cerebrospinal meningitis among the military. The material of the investigation, however, may give an indication whether in future there will be need of the tedious search for germ carriers and extensive isolation measures or whether sanitarians can and must be content with ordinary sanitary measures on acount of the widespread distribution of the germ, as is the case with tuberculosis.

New Building for the Institute for Maritime and Tropical Diseases in Hamburg

As the institute for maritime and tropical diseases in Hamburg, established in 1900, is no longer sufficient for the constantly increasing demands on it, a new building is to be erected. The number of physicians who desire to prepare themselves for the tropics in this institution or to utilize their observations made in the tropics is constantly increasing. The teaching work of the institute has been increased, lately, especially by the establishment of the colonial institute. The entire cost of the project will amount to $320,000 (1,339,300 marks), of which $55,000 will be devoted to the hospital and $35,000 to the animal house.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, April 18, 1910.

Inquiries into the Hospital Abuse

The precarious financial position of the public hospitals in Vienna has attracted public attention, as previously mentioned (Vienna Letter, The Journal, March 19, 1910, liv, 982). Dr. Hofmoke has investigated the out-patient departments and the wards. In 1908, 650,000 persons applied for treatment as out-patients in the nine large Vienna public hospitals and three private institutions, and 100,000 persons were received besides as in-patients. The population of Vienna being a little over 2,000.000, these figures show that fully 35 per cent. of the inhabitants were hospital patients. (These figures require some correcting, as they comprise also patients who came from abroad or the country or other towns.) Of these patients, 122,000 were treated in the three children's hospitals, and 160,000 in the clinics. No inquiry is made into the social or financial position of out-patients. For in-patients the rate of payment is 2½ kronen (about 55 cents) per day, which is paid either by the patients themselves, by their sick-benefit associations or by the communities to which they belong, if they can obtain a "letter of poverty" (*Armutszeugnis*). As there are more than 500,000 members of the compulsory sick-benefit associations (*Krankenkassen*) in Vienna, naturally they form a large percentage of the out-patients, for the physician of the benefit association is often, from sheer pressure of work, glad to be able to send patients to the hospital, where they get free treatment, while he signs their certificates for sick-pay. Naturally, this is expensive for the hospitals, and members of benefit associations ought not to receive free treatment from the hospitals, as they pay their rates to their clubs. Lately opposition has arisen among the patients and the hospital staffs. The free organization of practitioners has asked all hospital boards and private institutions to investigate the social status of their out-patients more strictly. In the Poliklinik lately persons have been refused treatment on the ground that they were members of a benefit association. Many members of such clubs have demanded the appointment of a large number of doctors, which would relieve the burdens of the present appointees. Of all the 650,000 out-patients, only 60 per cent. would have really been entitled to free medical aid. If the expenditure made for the other 40 per cent. could be saved, or if they could be made to pay for their treatment, the hospital deficit could be paid off easily. The greatest abuse, and consequently the largest loss of hospital money, occurred in the surgical cases, in which the cost of bandages and dressing material, for minor surgery, was very heavy. Special departments (ear, eye, nose and throat and skin) are also very much abused. The least amount of abuse takes place in this city in the children's hospitals.

Excitement in the Austrian Profession

Much excitement has been aroused among the practitioners here by the bill for compulsory insurance against sickness, which has now passed the stage of subcommittee. The resolutions of the committee recommend that every person who is employed at a fixed monthly or weekly salary, by a private person or corporation, and whose earning does not exceed 2,600 kronen (about $750) a year, or who may be dismissed at a notice of less than three months' time, shall be obliged to belong to a sick-benefit association. The medical profession disapproves the new plan, since its adoption would mean the ruin of the private practitioner. The medical representatives suggested an upper limit of 2,400 kronen ($500) yearly income for the members of sick-benefit associations. But the proviso with regard to three months' notice is simply misleading, for there is no three months' notice in this country between employers and employees. It would mean that everybody, without regard to income, could join the compulsory sick-benefit associations, and consequently, since the public only too gladly shirk doctors' bills, it would mean the destruction of the profession with us. Therefore mass-meetings of the physicians are being held at various points. Several very pointed resolutions have been passed and sent to the parliament. The profession is determined to call a general strike of all medical men in Austria. The public officers of health in the country, especially the numerous unpaid doctors of the hospital staffs, the physicians of the sick-benefit associations and those appointed by private corporations have been so organized that they are able and willing to leave off their work at a moment's notice. The responsibility, both moral and material, would rest with the legislative body which forced the profession to such a step.

Pharmacology

FOOD AND DRUG PURITY

Connecticut Report on Breakfast Foods, Canned Milk, Catarrh Powders and Other Nostrums

Although we are in the age of scientific, diagnostic acumen, and more rational treatment of disease, the necessity for exact knowledge of food purities and values and drug strength and adulterations should not be overlooked. Consequently, some of the data furnished by the last report of the Connecticut Agricultural Experiment Station is both of interest and value.

This report shows that most breakfast foods are clean and good, but exception must always be taken to such terms as those which many of the labels exploit. In other words, most cereals are wholesome, starchy foods, but such assertions as that they are "brain foods," or give special "muscular vigor," is misstatement of fact, and comes under the head of "misbranding." Also, such attempts to keep within the law and yet to fool the public as offered by the "Holland rusk," which states in large type, under a picture of a typical Dutch windmill, that it is "made in Holland," and then in small, inconspicuous type, "Holland, Mich.," should be absolutely condemned. The phrase on "grape nuts" declaring that it is "a food for brain and nerve centers," and on "Saxon Wheat Food" stating that it is "a brain, nerve, and muscle food," are untrue statements that are uncalled for and should be eliminated.

It is pleasing to find that of 28 samples of coffee examined, 6 unground and 22 ground, none was found adulterated; while thirteen years ago 25 per cent. of the coffee examined was found adulterated.

Thirty-six samples of condensed milk, representing all the brands of both sweetened and unsweetened milk, were examined. Dr. Hand's condensed milk (page 177 of the report) is stated to be "made from low grade or partially skimmed milk."

On this same page it is further stated that if the directions for use given on the labels are followed, "the resulting mixtures will contain, in all but one instance, only about half as much solids or fats as good cow's milk." The prescriptions given for making substitutes for mother's milk by diluting condensed milk shows that "these dilutions supply very much less of the essential food ingredients than mother's milk, while two-thirds of the nutritive matter may consist of cane sugar." The Emery brand of sweetened condensed milk is the only one that yielded, when prepared according to directions, a solution "containing normal quantities of milk solids and fat, but even this contained a great excess of cane sugar." "The other sweetened milks yielded products containing from 5.5 to 8.8 per cent. of milk solids, and from 1.5 to 2.2 per cent. of fat; in other words, a mixture only a little over half as rich as milk of good quality" (page 187).

"Of the unsweetened milks, the Blue Label brand alone yielded a product approaching good milk in richness."

Gelatin is the chief constituent of connective tissue, and any form of connective tissue may be made to yield gelatin. Much commercial gelatin is really a purified glue obtained from hide clippings. The purest form of gelatin is stated to be made from isinglass, obtained from the swimming bladder of sturgeon and other fish. Gelatin obtained from calves' feet is of high quality. Though gelatin is easily digestible in the stomach, it is not a tissue builder, and is not a substitute for proteids, but it is claimed that it protects protein destruction, and in such a sense might become a conservator of nutrition. Therefore, gelatin is not a real food, although perhaps of value in convalescence or as a calcium carrier when there is a tendency to hemorrhage and the blood is short on calcium. The best gelatin for medicinal purposes, at a fair price, is that prepared from calves' feet.

The Connecticut Experiment Station found unmistakable traces of alcohol ranging from 0.17 to 0.68 per cent. by volume in grape juice. Of course, such a small amount of alcohol is a negligible quantity. In no sample of the nine examined was there found salicylic acid, benzoic acid, or saccharin.

It is urged in this report that the consumer should understand that the so-called fruit extracts, banana, pineapple, strawberry and raspberry, are usually synthetic, and therefore jelly powders which are used as quick desserts do not represent flavors obtained from the fruits named (page 200).

Of 104 samples of lard examined, 97 were found not adulterated. The adulterated brands were shown to be adulterated "with cotton-seed oil, with a certain percentage of beef stearin."

As the alcohol costs about four times as much, in a good extract of lemon, as all the other constituents together, some manufacturers substitute a dilute alcohol and, rarely, even wood alcohol. As some oils, especially lemon oil, are practically insoluble in dilute alcohol, this renders some of the preparations of lemon extract worthless so far as the lemon is concerned. Of 55 samples of lemon extract examined, 22 were found not to be adulterated.

Sixty-five samples of vanilla extract were examined; "41 were found not adulterated, 2 artificially colored, 12 were compounds illegally labeled, and 17 were compounds or imitations, but labeled as such."

Of 30 samples of maple syrup examined, 8 were found to be adulterated, and 22 were correctly labeled as compound in nature.

It is interesting to note that of 44 samples of olive oil examined, obtained from grocery and delicatessen stores, all were found free from cottonseed, sesame and peanut oils, while of 65 samples obtained from druggists in 1907, 11 were found adulterated.

TEMPERANCE DRINKS

Eleven samples of "temperance drinks" were analyzed. "Raspberry shrub" and "wine mint" state on their labels that they contain benzoic acid. Neither benzoic acid nor salicylic acid were found in any of the other samples. "Wine mint," "coco-cola," and one sample of "Ron-Bre" contained over 1 per cent. of alcohol, while both samples of "iron brew" and a second sample of "Ron-Bre" contained smaller amounts. "Kolox," "Moxie," and "Phenix" contained no alcohol. The coloring was artificial in every case. In three samples a coal-tar dye was used, in the others caramel. The solid matter ranged from 0.60 to 64.41 per cent., consisting almost entirely of sugar. Saccharin was found in one sample of "Ron-Bre." "This was a very dilute preparation, consisting essentially of water, traces of sugar, and iron, colored with caramel, and sweetened with saccharin." "Coco-Cola" contained the active drug caffein.

OTHER PREPARATIONS

The Anglo-American Medicine Co.'s Catarrhal Powder was found to contain 0.88 per cent. of cocain. Dr. Birney's Catarrh Pulver was found to contain 1.10 per cent. of cocain. Dr. Cole's Catarrh Cure (the word "cure" being a misbrand) contained, in two samples, 3.08 and 3.22 per cent. of cocain respectively. Gray's Catarrh Powder contained 1.68 per cent. of cocain. Later samples of Gray's Catarrh Powder contained no cocain. Six samples of a powder sold under the name of "Bing," contained from 1.95 to 2.81 per cent. of cocain.

The sale of coca wine in Connecticut without a physician's prescription is illegal. If the coca wine contains cocain, as it should, it comes under the cocain law requiring a physician's prescription. If, on the other hand, it contains no cocain, as is stated on the label of "Vin Mariani," it is misbranded.

Wampole's Kola Wine contained 20.75 per cent. of alcohol by volume.

Of 32 samples of hydrogen dioxid solution examined, 23 were guaranteed by the label to contain acetanilid as a preservative. Two samples were claimed to contain boric acid as a preservative. In the remaining 7 samples no preservative was indicated. As peroxid of hydrogen is generally used externally, its acetanilid content would be harmless, but still it is not generally known that this substance is contained in these solutions. Six samples were found below standard strength and to exceed the limit of acidity required by the Pharmacopeia.

TOXICITY OF ARSACETIN

Dr. O. H. Benker, St. Louis, writes: "The article on Soamin in The Journal, April 16, 1910, p. 1323, brings to my attention sodium p-acetylaminophenyl arsonate (arsacetin) manufactured by Farbwerke vorm. Meister Lucius & Bruening, Hoechst, a.M., Germany. The literature from the manufacturer cites such authors as Neisser using it for subcutaneous applications in 9 grain doses, up to 20 injections. Kindly state whether this drug has produced any blindness or whether it is free from such dangers."

As the use of atoxyl showed that it was liable to produce blindness, an attempt was made to secure a less poisonous product by introducing other radicles in place of hydrogen in the amino group. Arsacetin was one of these which appeared likely to be less liable to produce unfavorable results than atoxyl. It differs from atoxyl by the introduction of the acetyl radicle into the amino group of atoxyl, in other words, it is acetyl-atoxyl. Experiments on animals showed it to be less poisonous than atoxyl, thus the experiments of Blumenthal, (*Med. Klin.*, Nov. 1, 1908, p. 1687) show that rabbits which would succumb to a dose of 0.4 to 0.5 gm. of atoxyl, bore doses of 0.6 to 0.8 gm. of acetyl-atoxyl (arsacetin). It is to be noted that these doses show relatively less toxicity for arsacetin but the difference does not seem to be very great. Arsacetin has now been used in a considerable number of cases and it appears that it has given rise to blindness in such a number of cases that it does not seem likely that it will fulfill the expectations of its originator by proving much less toxic than atoxyl. Reute (*München. med. Wchnschr.*, April 6, 1909, p. 718) reports a case of atrophy of the optic nerve after the use of 3.6 gm. of arsacetin.

J. Iversen (*München. med. Wchnschr.*, Aug. 31, 1909, p. 1785) used arsacetin in 148 cases of relapsing fever, in one of which permanent blindness due to toxic retro-bulbar neuritis occurred. The patient received 0.7 gm. and after seven days 0.5 gm. of arsacetin. Paderstein (*Berl. klin. Wchnschr.*, May 31, 1909, p. 1023) reports the observation of H. Lehmann, who administered atoxyl to a patient to the extent of 3.4 gm. without benefit. After some months six injections of arsacetin, amounting in all to 1.5 gm. were given, and soon after this complete blindness suddenly occurred. F. Hammes (*Deutsch. med. Wchnschr.*, Feb. 10, 1910, p. 267) reports a case in which he gave in eight doses 0.8 gm. of arsacetin, which was followed by complete blindness and finally by death; the death, however, was probably not due entirely to the arsacetin. He refers also to the report of Eckard (*Archiv f. Shiffsund Tropenhygiene*, xiii, 16), who saw 3 cases of blindness among 134 cases of sleeping sickness treated with arsacetin.

There are therefore in the literature reports of 7 cases in which blindness was undoubtedly due to this remedy. It is interesting to note that the experiments of Blumenthal with various derivatives of atoxyl in which substitutions were made in the amino group showed no constant reduction of toxicity. Blumenthal suggests that a change in the arsenic group may cause an enormous increase in the toxicity. A para-aminophenyl arsenous oxid obtained by the reduction of atoxyl produced death in a rabbit weighing 2,800 gm. in the small dose of 0.02 gm. It is quite possible that the occasional instances of severe poisoning by atoxyl and arsacetin are due to reduction in the system which the physician can neither foresee nor control.

G. Meszczersky (*Vrach. Gaz.*, 1909, No. 27) reports unfavorable results in the treatment of syphilis by arsacetin and remarks on the toxic action of the kidneys. In view of the foregoing it is evident that the greatest caution should be exercised in using a remedy capable of producing such serious side results. In this connection the conclusions of Hammes are worth quoting: "Finally I am inclined to believe that in arsacetin we have made a step forward in a path that promises marked success, but for general use this method is not yet applicable. As far as the application of this new preparation of arsenic in internal medicine, it is for the present not suited to displace the forms of arsenic previously used and to influence our previous treatment. The apparent benefits occasionally obtained in a small series of observations are abundantly counterbalanced by the damage which under some circumstances will quite overcome all of the satisfaction received from a success obtained in a probably unexpected way. Especially for physicians in practice to whom other considerations are of importance in addition to the general ethical viewpoint of our science, an attitude of marked conservatism toward the remedies of this group is decidedly to be recommended."

In the foregoing no criticism is intended on the method of introduction of arsacetin. The remedy has been put before the profession with very conservative statements and with an evident desire to supply a less dangerous preparation than atoxyl.

Chlorophosphate of Calcium

A correspondent asks: "What is the nature and therapeutic action of chlorophosphate of calcium which is given as an ingredient of Pautauberge's solution on the enclosed postal? W. H. S."

The postal sent by our correspondent is an advertisement of Pautauberge's solution purporting to be "Notes on Modern Pharmaceutical Remedies from American Medicine." "Bibliography omitted to save space." From this postal we learn that each tablespoonful contains "creosote 2 minims, chlorophosphate of lime 8 grains." Under "indications" we are told that "Pautauberge's solution of creosote with the chlorophosphate of lime is extensively used and recommended by French physicians in the treatment of pulmonary tuberculosis, chronic bronchitis, emphysemia (?), asthma, tuberculous infections in general, chronic intestinal diseases and wherever creosote would be indicated."

There is no such substance as "chlorophosphate of lime." There is chlorid of calcium and there are also several phosphates of calcium. Possibly the enterprising manufacturer has given this name to a solution of phosphate of lime in hydrochloric acid in the effort to mystify and impress the physician who may be led to believe that he is using a new and important remedy.

This is another example of the attempt to make scientific theories serve the needs of manufacturers of proprietary remedies. The manufacturer infers from two views of tuberculosis the need of remedies which his solution is designed to supply. A. Robin and Ferrier claim that a deficiency in calcium salts favors tuberculous infection, hence the need of "chlorophosphate of lime" which Pautauberge can alone supply. Even if there were a basis of truth in the theory, there is certainly no reason to suppose that the quality of calcium salts supplied by American pharmacists is in any way inferior to similar salts made in France.

Again, we are informed that the most probable port of entry for the tubercle bacillus is the intestinal tract and the creosote in the solution (2 minims to the tablespoonful) is supposed to ward off the danger of intestinal infection. Considering that several pounds of matter, solid and liquid, pass through the intestinal canal daily, is there not great danger that the 6 minims of creosote will fail to find some of the tubercle bacilli in the large mass of food and drink and swallowed sputum through which they are distributed?

REVISION OF THE PHARMACOPEIA

Abstract of the Report of the Committee on the United States Pharmacopeia

The American Medical Association's Committee on the United States Pharmacopeia has prepared a report to the Board of Trustees which may be briefly summarized as follows. It will appear in full later and is given in part here because of the convention next week.

The U. S. Pharmacopeia is at present the exclusive property of the Pharmacopeial Convention, whose privilege it is to determine what the Pharmacopeia shall be. Under the present constitution one-third of the members of the convention are from the medical profession, and the chief interest of the profession being the scope of the Pharmacopeia, it has been the opinion that the medical delegates should determine this, and the chairman of the committee on the coming revision has formally requested the American Medical Association to prepare a list of drugs for addition to or deletion from the Pharmacopeia. In order that the whole profession might be allowed to express its choice as to admissions, committees from the sections on Practice of Medicine, Ophthalmology, Stomatology, Pathology and Physiology, Obstetrics and Diseases of Women, Dermatology, Laryngology and Otology, and Nervous and Mental Diseases were appointed, and reports from all but the last three sections have been published in The Journal, Sept. 4, 1909, p. 791; Oct. 30, 1909, p. 1491; April 23, 1910, p. 1389, and April 30, 1910, p. 1457.

The professors of materia medica and pharmacology of the medical schools of the United States were asked to express their opinions on the general principles to be followed in the revision and on the admissions and deletions, and 131 replies were received after they had consulted with colleagues and alumni, and after examination of hospital records, etc. The answers to certain questions were sufficiently uniform, so that it is fair to formulate the following propositions as representative of the attitude of the medical schools. These propositions, therefore, merit the consideration of the Committee on Revision:

> The Pharmacopeia should not be a book of minimum standards, merely for the regulation of commerce in drugs and chemicals and the restriction of adulteration and fraud.
>
> It should be a compilation of acceptable standards for desirable medicaments, and designed primarily for the protection of the public health.
>
> It should be the standard of medicaments of recognized value and established use, and therefore be restricted rather than extended in number of titles.
>
> Food substances, such as figs and prunes, and beverages, such as brandy and whisky, should not be retained.
>
> Substances of no direct therapeutic value, but of value as solvents, should be relegated to the appendix.
>
> Duplications of preparations of the same drug, such as wines, vinegars, tinctures, etc., should be discouraged.
>
> Complex formulas should be deleted and placed in the N. F.
>
> The Pharmacopeia should conform to international nomenclature and standards.
>
> Compound proprietary or secret mixtures should be denied admission.
>
> The Pharmacopeia should be the accepted standard for medicinal prescribing.

The *majority* of those replying were in favor of deleting practically 300 drugs and preparations at present included in the Pharmacopeia. On a number of preparations, including several recently introduced, many did not express a direct opinion.

The committee makes no specific recommendations as to the revision of the Pharmacopeia, but suggests that if an advisory committee of 50 is determined on, one-half be from medical organizations.

Additional List of Delegates to Pharmacopeial Convention

Dr. Murray Galt Motter, assistant secretary, sends us the following list of officials, etc., and also an additional list of delegates to the United States Pharmacopeial Convention to be held in Washington, D. C., May 10, 1910. Previous lists were published in The Journal, February 26, page 719; March 12, page 890, and April 16, page 1324. The list is offered for publication "without prejudice," it being understood that such publication does not of necessity mean that these delegates will be received and seated by the Convention, as their credentials have not as yet been passed on by the Committee on Credentials and Arrangements.

INCORPORATORS

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Thomas C. Smith
Murray Galt Motter
Frank M. Criswell

OFFICERS

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Otto A. Wall, second vice-president
Reynold W. Wilcox, third vice-president
N. S. Davis, fourth vice-president
A. L. Lengfeld, fifth vice-president
Henry M. Whelpley, secretary
Murray Galt Motter, assistant secretary
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Alfred R. L. Dohme
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N. S. Davis
James M. Good
Willis G. Gregory
Walter S. Haines
Carl S. N. Hallberg
H. A. Hare
Henry Kraemer
Edward Kremers
A. B. Lyons
John Marshall
Oscar Oldberg
George F. Payne
Henry H. Rusby
Samuel P. Sadtler
Lucius E. Sayre
Wilbur L. Scoville
Edward H. Squibb
Alviso B. Stevens

ADDITIONAL DELEGATES

American Medical Association.—W. A. Puckner, J. A. Capps, George H. Simmons; Alternates, T. F. Reilly, John Howland, E. E. Hyde.

Arkansas Medical Society.—L. J. Kominsky, William Crutcher, William R. Bathurst.

Medical Society, State of California.—A. L. Lengfeld.

Georgia Pharmaceutical Association.—Alternates, W. S. Elkins, Jr., H. R. Palmer, Mallory H. Taylor.

University of Georgia, School of Pharmacy, Athens.—Robert C. Wilson, Atherton Seidell, Thad B. Rice; Alternates, Edgar W. Johnson, A. Dwight Deas, J. Robert King.

Chicago Medical Society, Cook County.—Walter S. Haines, Harold N. Moyer, Theodore Tieken.

Chicago College of Medicine and Surgery.—Clyde M. Snow, George F. Butler; Alternates, G. W. Funk, Lester E. Mee, R. H. Phillips.

Northwestern University, School of Pharmacy.—Harry Mann Gordin, Charles W. Patterson, Thomas Victor Wooten.

Iowa Pharmaceutical Association.—George Judisch, Edwin Franken, T. W. Ruete; Alternates, G. Scherling, J. L. Etzel.

University of Kansas, School of Medicine, Lawrence.—S. J. Crumbine, Franklin E. Murphy, George Howard Hoxie.

Tulane University, Medical Department, New Orleans.—Abraham Louis Metz, John Taylor Halsey, George Dock.

Maryland Pharmaceutical Association.—A. R. L. Dohme, Charles Morgan, E. F. Kelly; Alternates, C. H. Ware, D. R. Millard, E. W. Hodson.

College of Physicians and Surgeons, Boston.—Ephraim Cutter, I. E. Leonard, Charles Edward Buck.

Massachusetts Medical Society.—Frank G. Wheatley, Gilman Osgood, Maurice P. V. Tyrode.

Detroit College of Medicine.—Walter J. Wilson, Jr., E. M. Houghton, H. A. Freund.

Minnesota State Pharmaceutical Association.—John Nielson, J. W. Harrah, A. D. Thompson.

State University, College of Pharmacy, Minneapolis.—Frederick J. Wulling, W. A. Frost, Robert L. Moreland.

St. Louis College of Pharmacy.—J. M. Good, Charles E. Caspari, O. F. Claus; Alternates, Francis Hemm, Solomon Boehm, William K. Ilhardt.

Medical Society of New Jersey.—Henry L. Coit, Alexander Marcy, Jr., Philip Marvel; Alternates, Henry H. Davis, Joseph Tomlinson.

St. Louis University, School of Medicine.—G. C. Crandall, Jacob Friedman, E. Marsh Williams.

Washington University, Medical School, St. Louis.—Henry M. Whelpley, F. J. Taussig.

University and Bellevue Hospital Medical College, New York.—George B. Wallace, C. F. Claassen, Egbert Le Fevre.

University of North Carolina, Department of Pharmacy, Chapel Hill.—E. V. Howell, John Grover Beard.

North Dakota Pharmaceutical Association.—Oscar Hallenberg, H. L. Haussamen, W. S. Parker; Alternates, Walter Master, P. V. McCoy, A. H. Bell.

Ohio State Medical Association.—Torald Sollmann, Frank Winders, Julius Eichberg.

Northern Ohio Druggists' Association.—Eugene R. Selzer, J. George Schnuerer, Virgil Coblentz.

Massachusetts College of Pharmacy, Boston.—Elie H. La Pierre, Irving P. Gammon, Julian W. Baird; Alternates, John G. Godding, C. Herbert Packard, William H. Glover.

Cleveland School of Pharmacy (Western Reserve University, Department of Pharmacy).—Harry V. Arny, Joseph Feil, William T. Hankey.

Philadelphia County Medical Society.—Henry W. Cattell, Melvin M. Franklin, M. Howard Fussell; Alternates, Albert M. Eaton, Martha Tracy.

Medico-Chirurgical College of Philadelphia.—Judson Daland, I. V. Stanley Stanislaus, Herbert J. Smith; Alternate, John V. Shoemaker.

Alumni Association of the Philadelphia College of Pharmacy.—Charles H. LaWall, E. Fullerton Cook; Alternate, Clement B. Lowe.

South Dakota State Pharmaceutical Association.—David F. Jones, George F. Swartz, Floyd F. Brown; Alternates, I. A. Keith, James Lewis, Edward C. Bent.

Baylor University, Medical Department.—J. J. Calvert, E. H. Cary, J. M. Peck.

Baylor University, Pharmacy Department, Dallas.—J. Connor Chisholm, Sam Y. Althorp, Elbert Dunlap; Alternate, Chester A. Duncan.

University College of Medicine, Richmond.—Virginius Harrison, Alfred L. Gray, Albert Bolenbaugh; Alternates, Wortley F. Rudd, A. G. Brown, P. W. Howle.

State Medical Society of Wisconsin.—A. S. Loevenhart, H. C. Russell, John L. Yates; Alternates, W. H. Washburn, W. B. Hill, O. H. Foerster.

Correspondence

Orthoform Erythema—Idiosyncrasy

To the Editor:—While treating a varicose ulcer last winter I had occasion to employ an ointment containing 10 per cent. of orthoform, this being my first personal experience with that drug. About ten hours afterward I developed a severe erythema which rapidly spread over the entire body, involving the eyes, nasal mucosa, mouth, external ear, prepuce, etc., very much like rhus poisoning. Following the appearance of huge wheals, the itching became almost intolerable, and the only rest to be had for four days and nights was momentary relief while lying in a dilute phenol bath. Washes, dusting powders, ointments, narcotics in every variety and dose, seemed useless. The skin gradually cleared after some ten days, though evanescent wheals appeared for several weeks. The etiology was then unsuspected. Some two months later I employed orthoform again as an insufflation in a case of ulcerative pharyngitis. I handled the powder about 8 p. m., and the following morning awoke with both eyes swollen shut, face, ears, neck and upper chest erythematous to a degree resembling erysipelas. This disappeared in 48 hours. The determination of the etiology now included orthoform as a tentative feature. April 29, I dusted orthoform on a fissure in a woman's hand to relieve the pain she complained of, taking precautions not to come in direct contact with the drug. The next morning, nevertheless, I awoke with my face in a condition of erythema that caused my patients to express their surprise or to look at me with the suspicion that I am a "drinking man." Some of them say nothing but look twice, which is worse punishment for a teetotaler. The diagnosis is now positive and complete. Hereafter I shall apply orthoform only on the end of a ten-foot pole. I have been unable to find any similar reports in the literature on orthoform available to me.

Wm. Brady, M.D., *Elmira, N. Y.*

Miscellany

Gastric Ulcer.—At the meeting of the British Royal Society, January 20 (reported in *Nature*, January 27) Dr. C. Bolton made a further report on his studies of gastric ulcer. In four previous papers he demonstrated the properties of gastrotoxic serum, obtained by immunizing the rabbit with guinea-pig's gastric cells, and showed that ulcers produced by the serum healed within three or four weeks if the animal were in normal condition and with its normal diet. The importance of gastric ulcer in the human subject led him to investigate the causes of its chronicity. He found in his experiments that so long as the stomach emptied itself in the normal time it was impossible to delay the healing of gastric ulcer by decreased or increased acidity of the gastric contents, or by feeding with infected food. The situation of the ulcer in the stomach did not materially affect the results. In this latest communication he deals with the effects of disturbance of motor function of the stomach on the healing of ulcer, the food and acidity being normal. Cats were employed for this experiment and the gastric ulcers were produced by local injection of gastrotoxic serum into the stomach wall, the serum being prepared by immunizing a goat with the gastric cells of the cat. Motor insufficiency leading to retention of the stomach contents, which is a common form of indigestion in man, was produced by constricting the pylorus with a rubber tube, the ulcer forming on the anterior wall of the stomach. Healing was found to be delayed for at least twice the usual time. Though the ulcers ultimately healed, the regenerated mucous membrane was of a lower type than normal. Thus it may consist on the forty-first day of a single layer of cubical cells such as should have been formed by the tenth day; or of glands formed entirely of duct epithelium. The more sclerotic the base of the scar the more imperfect was the redeveloped mucosa. In certain cases the normal healing of ulcers was delayed by necrosis of their basal granulation tissue or by excessive formation of fibrous tissue and here also the mucous membrane formed was of a lower type. He considers, therefore, that the delay of healing in case of motor insufficiency was an exaggeration of the condition occasionally seen in the normal state. Both conditions are due to digestion of the base of the ulcer leading to necrosis or increased formation of fibrous tissue so that the regenerated membrane is unable to grow over it or does so in an imperfect manner. When the base is very fibrous the glands have not a sufficient vascular and cellular stroma in which to proliferate.

Hemagglutinins, Hemopsonins and Hemolysins in Normal and Pathologic Blood.—L. S. Dudgeon and H. A. F. Wilson reported to the Royal Society, Dec. 9, 1909 (*Nature*, December 23), their latest results of studies on the presence of these substances in human blood. These results are based on hundreds of experimental observations which have been made on normal and pathologic blood, and are as follows: 1. Autoagglutination of the red blood cells, as tested for by the methods which we have employed, may be shown to occur with specimens of pathologic blood only occasionally, but never with normal blood; and autohemolysis has not been met with. 2. Isoagglutination is often met with in specimens of blood obtained from patients suffering from the same disease. 3. Hemoagglutination is largely a specific phenomenon, both in normal and pathologic blood, and the specific effect can be shown to persist even if the red cells have been subjected to high degrees of temperature or to complete drying. 4. Hemoagglutination and bacterial agglutination are distinct phenomena. 5. Well-marked isohemolysis in specimens of normal and pathologic blood is not common, although some degree of hemolysis can frequently be demonstrated. 6. Concerning phagocytosis: It would appear necessary to avoid mixing specimens of normal or pathologic blood, because just as samples of serums are known to vary in value, so do the leucocytes, although to a less extent, whether they are obtained from specimens of normal or pathologic blood. Still further, by mixing samples of normal or pathologic blood a hemolytic action may be induced which in itself has been found capable of exciting abnormal results in phagocytosis. 7. It appears to be incorrect to regard a specimen of blood as normal until it has been subjected to a detailed examination by the methods referred to in this and the two previous communications, irrespective of its actual source.

Prognosis of Pelvic Tuberculosis.—The prognosis of intrapelvic tuberculosis is bad, especially in advanced cases. If, however, the patients could be seen in the early stages, whether primary or secondary, provided the original focus in the secondary cases is under control or not far advanced, removal of the offending organs gives the best percentage of cures. At present the rate of mortality is as high or higher than that of cancer.—F. J. Shoop, in *Long Island Medical Journal.*

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

Stain for Laboratory Benches

To the Editor:—There is a method of treating or staining tops of laboratory benches so that they will not be affected by chemicals spilled on the wood. I have seen the method described somewhere, but cannot recall where. There were three preparations used, I think, one of sulphuric acid, one of copper solution, and a third of oil or wax. Can you give me the formula or refer me to some one from whom I can get it?

GEORGE D. HENDERSON, M.D., Holyoke, Mass.

ANSWER.—The formula referred to is no doubt the preparation which is said to give laboratory tables the so-called "ebony" finish —which is resistant to chemical reagents which either stain or corrode ordinary wood. Professor Barnes (Proc. Am. Pharm. Assn., 1899, p. 397) stated that the following method is employed in several laboratories in Copenhagen. The two following solutions are required:

Solution A. Copper sulphate., 125 gm.; potassium chlorate, 125 gm.; water, 1,000 gm. Boil until salts are dissolved.

Solution B. Anilin hydrochlorid, 150 gm.; water, 1,000 gm.; or, anilin, 120 gm.; hydrochloric acid, 180 gm.; water, 1,000 gm.

Apply two coats of Solution A while hot, applying the second as soon as the first has dried. Then apply two coats of Solution B and allow wood to dry thoroughly. Next a coat of raw linseed oil is rubbed in by means of a cloth to give a polish. In the treatment with the oil, the deep black color is partially brought out, but this does not uniformly appear until the table has been thoroughly washed with hot soap-suds. This latter treatment removes superfluous chemicals. To keep table in condition it is said to be necessary only to wash off occasionally with soap and water, and then to rub with oil. The cost of both solutions above given will not be over fifty cents. The amount given above is sufficient for ten square yards of surface.

OFFICIAL ANTITOXINS

To the Editor:—I wish information concerning the antitoxins which are official in the U. S. Pharmacopeia and how they are standardized.

J. E. OLSSON, Omaha.

ANSWER.—There is but one official antitoxin: Serum Antidiphthericum. The Pharmacopeia requires that "the standard of strength expressed, in units of antitoxic power, should be that approved or established by the United States Public Health and Marine-Hospital Service." This standard is described in Bulletin 21 of the Hygienic Laboratory, U. S. P. H. and M.-H. S. The Hygienic Laboratory has also established a standard for tetanus antitoxin which is published in Bulletin 43. The standardization of tetanus antitoxin is discussed in THE JOURNAL, Jan. 26, 1907, p. 338, and (editorially) May 18, 1907, p. 1680, and May 30, 1908, p. 1798.

The method of determining the potency of antidiphtheric serum is substantially as follows: 1 c.c. of a standard test serum, diluted so that each c.c. contains 1 antitoxic unit, is mixed with various quantities of diphtheria toxin and injected into guinea-pigs, weighing, each, 250 gm., and the least amount of the toxin which will neutralize the 1 c.c. of standard antitoxic serum and just kill a guinea-pig within four days is determined. This amount is called the L + or lethal dose. The serum to be tested is then mixed in varying but definite quantities with 1 L + dose of the toxin and injected into guinea-pigs, weighing 250 gm. From the guinea-pig which dies within four days under the largest dose of the serum to be tested is determined the amount of serum, which is equivalent to a single antitoxic unit. From this the antitoxic strength of the serum is calculated.

The standard for tetanus antitoxin is defined as follows: "The immunity unit for measuring the strength of tetanus antitoxin shall be ten times the least quantity of antitetanic serum necessary to save the life of a 350-gm. guinea-pig for 96 hours against the official test dose of a standard toxin furnished by the Hygienic Laboratory of the Public Health and Marine-Hospital Service." The standardization of tetanus antitoxin does not differ radically from the standardization of diphtheria antitoxin. The toxins and antitoxins are measured against each other reciprocally, so that change or deterioration of either the standard toxin or the standard antitoxin may readily be determined. Duplicate toxins and antitoxins made from time to time will act as checks against deterioration of either the standard toxins or antitoxins. The value of an unknown serum is measured indirectly through the toxin, using the L + dose as the test dose. The L + dose is the smallest quantity of tetanus toxin that will neutralize one-tenth of an immunity unit, plus a quantity of toxin sufficient to kill the animal in just four days.

The Public Service

Medical Department U. S. Army

Changes for the week ended April 30, 1910:

King, Edgar, lieut., April 20, the leave of absence heretofore granted for ten days is extended fifteen days.

Norriss, H. C. R., 1st lieut., M.R.C., April 13, ordered to Fort Stevens for temporary duty.

Lyster, Theodore C., major, April 13 arrived at San Francisco and assigned to temporary duty at Headquarters, Department of California, pending sailing of transport to Manila, P. I.

Marietta, S. U., 1st lieut., M.R.C., April 23 left Fort Des Moines, Iowa, en route to Fort Mackenzie, Wyo., for temporary duty.

Suggs, Frank, 1st lieut., M.R.C., April 22 granted 30 days' leave of absence, about May 20, 1910.

Ruffner, Ernest L., major, April 22, granted leave of absence for two months.

Girard, Joseph B., colonel, April 25, granted leave of absence for four months, to take effect on or about June 15, 1910, with permission to go beyond the sea.

Mills, R. H., dental surgeon, April 21, reports return to Fort Adams, R. I., from temporary duty at Fort Ethan Allen, Vt.

Casaday, George H., dental surgeon, April 16, ordered to proceed from Presidio of Monterey, Cal., to Fort Rosecrans, Cal., for temporary duty.

Thornburgh, R. M., major, promoted to such, to rank from April 7, 1910.

Buchsbaum, Maurice, 1st lieut., M.R.C., April 20, reports arrival at San Francisco, Cal., from Manila, P. I., on 30 days' leave of absence.

Holingsworth, R. M., dental surgeon, April 22, reports on two months' leave from date.

Rutherford, Henry H., captain, April 23, granted leave of absence for four months, with permission to return to the United States via Europe, to take effect on his relief from duty in the Philippines Division.

Kelly, John P., 1st lieut., M.R.C., April 23, relieved from duty at Fort Ruger, H. Ty., and will proceed to San Francisco, and on arrival report by telegraph to the Adjunant General of the Army for further orders.

Marshall, John S., examining and supervising dental surgeon, April 23, relieved from duty in the Philippine's Division, and will proceed on the transport to sail from Manila, P. I., about Oct. 13, 1910, to San Francisco for further orders.

McAlister, John A., Jr., dental surgeon, April 23, relieved from duty in the Philippine's Division, and will proceed on the transport to sail from Manila, P. I., about Dec. 15, 1910, to San Francisco for further orders.

The following named officers of the Medical Corps and of the Medical Reserve Corps are relieved from duty in the Philippines Division, and will proceed on the transport to sail from Manila, P. I., about Aug. 13, 1910, to San Francisco for further orders: Whitmore, Eugene R., major; Nelson, Kent, captain; de Krafft, S. Chase, 1st lieut., M.R.C.; Brownlee, Charles Y., major; Bartlett, William H., lieut.; Pyles, Will L., captain; Cullen, Charles W., 1st lieut., M.R.C.

Same as above, except to sail from Manila, P. I., about Sept. 15, 1910: Rich, Edwin W., captain; Walker, Thomas C., 1st lieut., M.R.C.; Kellogg, Preston S., 1st lieut., M.R.C.

Same as above, except to sail from Manila, P. I., Oct. 15, 1910: McKinney, Garfield L., lieut.; Phillips, Hiram A., lieut.; Weston, Henry R., 1st lieut., M.R.C.; Dulin, Charles T., 1st lieut., M.R.C.

Same as above, except to sail from Manila, P. I., Dec. 15, 1910: Fife, James D., captain; Scott, George H., captain; Kilbourne, Edwin D., captain.

Norriss, H. C. R., 1st lieut., M.R.C., April 23, relieved from duty at Vancouver Barracks, Washington, and will proceed to San Francisco, and take transport to sail from that place about July 5, 1910, for duty in the Philippines Division.

Peck, Luke B., 1st lieut., M.R.C., April 23, relieved from duty at Fort Banks, Mass., and will proceed to San Francisco and take the transport to sail from that place about July 5, 1910, for duty in the Philippines Division.

Billingslea, C. C., captain, April 23, granted leave of absence for one month, with permission to apply for an extension of one month.

Mills, Robert H., dental surgeon, April 27, granted 20 days' leave of absence.

Lyster, Wm. J. L., major, April 16, detailed as instructor at the State Rifle Range, Camp Williamson, Mass., from May 23 to 27, 1910.

Gunckel, George I., dental surgeon, April 15, ordered to Fort Barrancas, Fla., for temporary duty for the period of six weeks.

McCord, Donald P., 1st lieut., M.R.C., April 26 on arrival at San Francisco, Cal., to proceed to Fort Ward, Washington, for duty.

Krebs, Lloyd Le R., captain, April 26, relieved from duty at Army General Hospital, Fort Bayard, N. M., and ordered to Fort Baker, Cal., for duty.

Tefft, William H., captain, April 26, relieved from duty at Fort Baker, Cal., and ordered to the Army General Hospital, Fort Bayard, N. M., for duty.

Owen, Leartus J., captain, April 18, granted 30 days' leave of absence to take effect about May 10, 1910.

Harris, Jesse R., captain, April 24, left Fort George Wright, Washington, en route to Boise Barracks, Idaho, for temporary duty.

Medical Corps, U. S. Navy

Changes for the week ended April 30, 1910:

Davidson, A. B., asst.-surgeon, detached from the naval hospital, Mare Island, Cal., and ordered to the *Iris*.

Holeman, C. J., asst.-surgeon, detached from the *Iris* and ordered to duty in connection with fitting out the *Petrel* and to duty on board the latter vessel when placed in commission.

Valz, E. V., asst.-surgeon, ordered to the navy yard, Portsmouth, N. H., and to additional duty at the naval prison at that yard.

Bacon, S., asst.-surgeon, detached from the naval training station, San Francisco, and ordered to duty in connection with the *Wheeling* and to duty on board that vessel when placed in commission.

Spratling, L. W., surgeon, detached from the *Missouri* and ordered to the navy yard, Washington, D. C.

Brownell, C. D., surgeon, detached from the *New Jersey* and ordered to the *North Dakota*.

Berryhill, T. A., surgeon, ordered to the marine recruiting station, New York.

Traynor, J. P., P. A. surgeon, detached from the *North Dakota* and ordered to continue other duties.

Wickes, G. L., P. A. surgeon, detached from the navay recruiting station, Cedar Rapids, Iowa, and ordered to the Asiatic station.

Robnett, A. H., P. A. surgeon, detached from the naval training station, Newport, R. I., and ordered to the naval recruiting station, Cedar Rapids, Iowa.

Stibbens, F. H., asst.-surgeon, ordered to the naval training station, Newport, R. I.

Pollard, J. B., asst.-surgeon, detached from the *Missouri* and ordered to the *North Dakota*.

Murphy, J. A., surgeon, April 26 detached from the marine recruiting station, New York, and ordered to the Naval Academy.

Asserson, F. A., surgeon, commissioned surgeon from Feb. 5, 1910.

Hayden, R., P. A. surgeon, commissioned P. A. surgeon from March 11, 1910.

U. S. Public Health and Marine-Hospital Service

Changes for the week ended April 27, 1910:

Trask, J. W., asst.-surgeon general, leave granted for 1 month from March 16, 1910, amended to read 29 days from March 16, 1910.

Irwin, Fairfax, surgeon, granted 1 month and 10 days' leave of absence from Sept. 1, 1910.

Kalloch, P. C., surgeon, detailed to represent the Service at the next annual meeting of the Oklahoma State Health Association, to be held in Tulsa, Okla., May 11, 1910.

White, J. H., surgeon, leave granted for 14 days from April 1, 1910, amended to read from April 4.

Wertenbaker, C. P., surgeon, detailed to represent the Service at the meeting of the Association for the Study and Prevention of Tuberculosis, to be held in Washington, D. C., May 2-3, 1910.

Moore, Dunlop, P. A. surgeon, relieved from duty at San Francisco, and directed to proceed to Baltimore, Md., and report to the medical officer in command for duty and assignment to quarters.

Lloyd, B. J., P. A. surgeon, granted 1 month's leave of absence from April 20, 1910, on account of sickness.

Warren, B. S., P. A. surgeon, detailed to represent the Service at the annual meeting of the Missouri Medical Association, to be held in Hannibal, Mo., May 3-5, 1910.

Grimm, R. M., asst.-surgeon, relieved from duty on the U. S. Revenue Cutter *Algonquin* and directed to proceed to Evansville, Lnd., and assume temporary command. Granted 7 days' leave of absence en route to station.

Bailey, C. A., acting asst.-surgeon, granted 7 days' leave of absence from April 21, 1910.

Diaz, Jose A., acting asst.-surgeon, granted 30 days' extension of leave from Jan. 5, 1910, on account of sickness.

Naulty, C. W., Jr., acting asst.-surgeon, granted 6 days' leave of absence from April 27, 1910.

Parker, T. F., acting asst.-surgeon, granted 15 days' leave of absence from April 16, 1910.

Stewart, W. J. S., acting asst.-surgeon, granted 1 month's leave of absence, without pay, from March 23, 1910.

[illegible]., technical assistant, Hygienic Laboratory, [illegible] the Service at the meeting of the American [illegible]ciation, to be held in Richmond, Va., May 2-7, 1910.

Stiles, C. Wardell, Chief, Division of Zoology, Hygienic Laboratory, designation changed to Professor of Zoology, effective March 23, 1910.

Hunt, Reid, Chief, Division of Pharmacology, Hygienic Laboratory, designation changed to Professor of Pharmacology, effective March 23, 1910.

Boards of medical officers were conve[illegible] 1910, for the purpose of making physical [illegible] for the position of cadet in the Revenue-[illegible]

Boston, Surgeon L. L. Williams, chairn[illegible] Salmon, recorder.

Cleveland, Ohio, P. A. Surgeon C. W. Wille, chairman; Acting Asst.-Surgeon R. Morgan, recorder.

Deaths

Herbert Leslie Burrell, M.D., surgeon and educator; president of the American Medical Association in 1908-9; died at his home in Boston, April 27, from valvular heart disease, associated with disease of the kidney, aged 54.

Dr. Burrell was born in Boston, received his preliminary education at the English High School in that city; and graduated from Harvard Medical School in 1879; after a few years of general practice, during which he gradually turned toward surgery, he commenced his work as a teacher as demonstrator of surgical technic in his alma mater; for many years he gave a systematic course of lectures on surgery and in 1903 was made professor of clinical surgery.

He was made surgeon-general of Massachusetts in 1893, and in 1898, saw service during the Spanish-American War as surgeon in charge of the Massachusetts Volunteer Aid hospital ship, *Bay State*.

Herbert Leslie Burrell, M.D., 1856-1910

He became surgeon in the Children's Hospital in 1893; and was made consulting surgeon to the Carney Hospital in 1899 and senior surgeon of the Boston City Hospital in 1897; he was made chairman of the Committee on Arrangements for the session of the Association in Boston in 1906; and the success of every detail of arrangement for this session demonstrated his remarkable ability as an executive officer. Dr. Burrell was a surgeon of high grade; he was one of the first successfully to ligate the innominate artery and was the first successfully to reimplant an entire trephine button.

Dr. Burrell's society membership included the American Surgical Association, of which he was secretary for several years; the American Society of Clinical Surgery, American Orthopedic Association, and American Association of Pathologists and Bacteriologists, and from 1899 to the time of his death he was president of the Massachusetts Branch of the American Red Cross.

During the last year, Dr. Burrell had been an invalid on account of chronic disease of the kidney with cardiac complications, and had been unable to teach or to practice. It will be remembered that, at the Atlantic City session of the American Medical Association in 1909, he was ill and unable to be present and to preside over the House of Delegates and to open the General Meeting.

By his death the Association loses a valuable officer and member; American surgery a skilful exponent; and the medical profession one who was always ready to give his best efforts and to make any sacrifice for the realization of ideals, the elevation of medical standards, and the equalization of privileges.

A committee of the third year class of Harvard Medical School, the last class taught by Dr. Burrell, met April 28 and passed resolutions expressing their sense of loss in the death of Dr. Burrell, and their appreciation of his life of completed endeavor as a distinguished surgeon, a genial teacher, and a firm friend.

George Hershey Fox, M.D. Medico-Chirurgical College of Philadelphia, 1897; assistant surgeon of volunteers, assigned to the Seventh U. S. Cavalry during the Spanish-American War; later in charge of a private sanatorium for tuberculosis at Asheville, N. C.; and afterward associated in practice with his brother, Dr. L. Webster Fox, in Philadelphia; for several years bacteriologist of the Pennsylvania State Sanatorium for Tuberculosis, Mount Alto; died at the home of his father in Hummelstown, Pa., April 14, from pulmonary tuberculosis, aged 37.

Augustin H. Goelet, M.D. Bellevue Hospital Medical College, 1874; a member of the American Medical Association and New York Academy of Medicine; once president of the American Electro-Therapeutic Association, and first vice-president of the Tri-Professional Medical Society of New York City; professor of gynecology in the New York School of Clinical Medicine, and gynecologist to the Metropolitan Hospital and the West Side Dispensary, New York City; died April 26, aged 56.

William Reed Cisna, M.D. University of Pennsylvania, Philadelphia, 1865; a member of the American Medical Association and American Academy of Medicine; assistant surgeon and brevet major of volunteers during the Civil War; for many years chief medical examiner of the Pennsylvania Railroad Relief Department, and four years ago placed on the retired list; died at his home in Ickesburg, Pa., April 17, aged 72.

Bigelow T. Sanborn, M.D. Medical School of Maine, Brunswick, 1866; a member of the Maine Medical Association; for twenty-seven years superintendent of the Maine Insane Hospital, Augusta, and for seventeen years prior to that time first assistant physician to the institution, died at his home, April 18, from cerebral hemorrhage, aged 70.

R. D. L. Evans, M.D. Berkshire Medical College, Pittsfield, Mass., 1859; for nearly half a century a practitioner of Bainbridge, N. Y., and for many years a member of the State Medical Association; a member of the school board and board of health of Bainbridge; died at his home April 10, from nephritis, aged 74.

Garretson Lyon Carhart, M.D. Albany (N. Y.) Medical College, 1848; formerly a member of the Iowa State Medical Society; surgeon of the Thirty-first Iowa Volunteer Infantry, and later division surgeon during the Civil War; a pioneer practitioner of Linn county; died at his home in Marion, April 20, aged 86.

Frederick Brooke McGuffey, M.D. Missouri Medical College, St. Louis, 1872; for twelve years postmaster of Fairmount, Tenn.; died at his home in that place, April 16, from a gunshot wound of the heart, believed to have been self-inflicted with suicidal intent while despondent on account of ill-health, aged 60.

John Roberts Haley, M.D. Medical School of Maine, Brunswick, 1884; a member of the American Medical Association and Maine Academy of Medicine; died in his office in Kennebunk, April 21, from the effects of a gunshot wound of the head, self-inflicted, it is believed with suicidal intent, aged 52.

Thomas Bland Camden, M.D. Jefferson Medical College, 1854; from 1871 to 1881, superintendent of the West Virginia State Hospital for the Insane, Weston; formerly a member of the West Virginia State Medical Association; died at his home in Parkersburg, April 17, from cerebral hemorrhage, aged 80.

Calvin Alonzo Spencer, M.D. Dartmouth Medical School, Hanover, N. H., 1873; a veteran of the Civil War; health officer of Spring City, Pa.; and formerly president of the Luzerne County Medical Society; died suddenly in front of his home, April 20, from heart disease, aged 68.

Albert L. Brands, M.D. Missouri Medical College, St. Louis, 1880; a member of the American Medical Association and

Southern Illinois Medical Society; once state senator; and postmaster of Prairie du Rocher, Ill.; died at his home in that place, April 20, from heart disease, aged 53.

James W. Sanders, M.D. Gate City Medical College, Texarkana, Texas, 1907; formerly of Stilson, Ga., but recently of Tulsa, Okla., died at police headquarters in the latter city, February 7, from the effects of strychnin, self-administered, it is believed, with suicidal intent, aged 30.

Sanford M. Burrell, M.D. Kentucky University, Medical Department, Louisville, 1904; a member of the Oklahoma State Medical Association; formerly a member of the health board of Dustin, I. T.; died at his home in Eufala, Okla., February 11, from pneumonia, aged 48.

James S. O'Brien, M.D. Rush Medical College, 1885; a member of the State Medical Society of Wisconsin; died at his home in Milwaukee, April 25, from cerebral hemorrhage, following septicemia of nearly two years' standing, due to an operation wound, aged 50.

Edson E. Boyd, M.D. New York University, New York City, 1854; of Ashville, N. Y.; assistant surgeon of the One Hundred and Twelfth New York Volunteer Infantry during the Civil War; died at the home of his son in Erie, Pa., April 19, aged 78.

Abraham Bernstein, M.D. Cornell University, New York City, 1902; a member of the Eastern Medical Society, New York City; a medical inspector of the department of health of Brooklyn; died at his home in New York City, April 15, aged 35.

Harry R. Morris, M.D. Saginaw Valley Medical College, Saginaw, Mich., 1897; formerly a member of the American Medical Association, and a practitioner of Sebewaing, Mich.; died at his home in Vassar, April 19, from pernicious anemia, aged 36.

Seth Bradbury Hinkley, M.D. Medical School of Maine, Brunswick, 1870; Jefferson Medical College, 1890; died at his home in Stanberry, Mo., where he had practiced for 33 years, April 18, from septicemia, due to a scratch of the hand, aged 65.

Charles Mitchell Baker, M.D. Missouri Medical College, St. Louis, 1893; of Santa Fe, Mo.; a member of the American Medical Association; was found dead in his bed, April 2, from the effects of an overdose of chloroform and morphin, aged 41.

Joseph Milleron, M.D. Northwestern University Medical School, Chicago, 1869; of Salt Lake City; a member of the Utah State Medical Association; was accidentally shot and killed in Parley's Canyon, Utah., April 22, aged 67.

Dudley Beckwith Smith, M.D. University of Vermont, Burlington, 1856; at one time representative from Plainfield, Vt., in the state legislature; died at his home in Plainfield, April 13, from cerebral hemorrhage, aged 77.

Charles S. Swan, M.D. Leonard School of Medicine, Raleigh, N. C., 1892; a colored practitioner of Columbus, Ga.; died suddenly while testifying in the City Court of that city, April 16, from cerebral hemorrhage, aged 43.

Loima B. Woolson (license, Minn., exemption certificate, 1883); a homeopathic practitioner of Currie, Minn.; died in the Odd Fellows' Home, Northfield, Minn., Jan. 12, 1909, from senile debility, aged 96.

Abraham Grove Magill, M.D. American Medical College, Eclectic, Cincinnati, 1854; died at his home in Silver Lake, Kan., February 27, from heart disease, complicating disease of the kidney, aged 76.

Louis H. Kniskern (license, Iowa, years of practice, 1886); surgeon in the Navy during the last two years of the Civil War; died at his home in Clinton, Iowa, April 17, from senile debility, aged 73.

Daniel D. Brengle (license, years of practice, Ill., 1879); for 65 years a practitioner of Winchester, Ill.; died at the home of his son in that city, April 22, from cerebral hemorrhage, aged 92.

William W. Gould, M.D. Berkshire Medical College, Pittsfield, Mass., 1852; for 50 years a practitioner of Rochelle, Ill.; died at his home, April 24, from cerebral hemorrhage, aged 83.

Robert R. Pollock, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878; a practitioner, and of late a banker of Nebo, Ill.; died at his home in that place, April 18, aged 67.

William M. Miller, M.D. Jefferson Medical College, 1889; a member of the Medical Society of the State of Pennsylvania; died at his home in McAlevy's Fort, April 23, aged 46.

Winfield Scott Martin, M.D. Starling Medical College, Columbus, Ohio, 1872; formerly of Kingwood, W. Va.; died suddenly at his home in Sutton, W. Va., April 22, aged 67.

John Andrew Callaway, M.D. College of Physicians and Surgeons, New York City, 1881; died at his home in Milledgeville, Ga., May 17, 1909, from heart disease, aged 50.

John Francis Perry, M.D. New York University, New York City, 1884; of Boonville, N. Y.; died in Titusville, Fla., January 30, from intestinal obstruction, aged 50.

George P. Cook, M.D. Medical College of the State of South Carolina, Charleston, 1852; of Paris, Texas; died at the home of his son in Terrell, Texas, April 16, aged 79.

Samuel H. Thomas, M.D. University of Louisville, 1893; of Spencer, Ky.; died at the home of Dr. Morton Faulkner in that place, April 21, from nephritis, aged 37.

Micheal Henry Lynch, M.D. University of Vermont, Burlington, 1882; for six years city physician of Chicopee Falls, Mass.; died at his home, April 16, aged 52.

William T. Lawler, M.D. University of Nashville, Tenn., 1868; a Confederate veteran; died at his home in Martin, Tenn., April 17, from pneumonia, aged 73.

Osborne Totten, M.D. Trinity Medical College, Toronto, 1885; died suddenly at his home in Forest, Ont., April 14, from cerebral hemorrhage.

James F. Cross, M.D. University Medical College of Kansas City, Mo., 1903; died at his home in Pape, Mo., February 21, from pneumonia, aged 38.

Edward W. Thomason, M.D. University of Alabama, Mobile, 1861; of Nashville, Tenn.; died at the home of his sons in that city, April 23, aged 74.

Elihu B. Thomas, M.D. Homeopathic Medical College of Missouri, St. Louis, 1883; died at his home in St. Louis, April 25, aged 83.

William David Jones, M.D. University of Maryland, Baltimore, 1905; died at his home in Canton, Baltimore, April 18, aged 31.

Marriages

LEO JACOBI, M.D., to Miss L. Wolfenstein, both of New York City, April 21.

JOHN P. STOVER, M.D., Shady Grove, Md., to Miss Nora Snively, April 17.

DAVID FRANKLIN, M.D., to Miss Mollie Bearman, both of Baltimore, April 17.

LEO MAYER, M.D., to Miss Edith Heinmann, both of New York City, April 14.

ELZA W. BURRIS, M.D., to Mrs. Nellie G. Stout, both of Indianapolis, April 20.

JOSEPH L. LANE, M.D., to Miss Bertha I. Freyd, both of Seattle, Wash., April 5.

AUGUSTUS B. WADSWORTH, M.D., to Miss Caroline Delano, both of New York City, April 19.

WILLIAM M. BRADSHAW, M.D., New York City, to Miss Harriet H. Haight, of Brooklyn, April 9.

GARY THOMAS GOSSARD, M.D., Perry, Ill., to Miss Jessie M. Fisher, of Chicago, at Perry, April 5.

ABRAHAM HUNTSINGER, M.D., Mishawaka, Ind., to Miss Ida Phoebe Piper, of Rockfield, Ind., April 6.

JOHN HENRY BREYER, M.D., Pasadena, Cal., to Miss Georgia Allen of Chicago, at Los Angeles, April 9.

EDWARD CAMERON THOMPSON, M.D., to Mrs. Josephine Simis Marvel, both of Newburg, N. Y., April 21.

J. HOLRIDGE KIDWELL, M.D., Parkersburg, W. Va., to Miss Elizabeth Ann Hutson, at Rawlings, Md., April 20.

JOHN SEBASTIAN DERR, M.D., Baltimore, to Miss Jeannette Rose Humphreys, of Charlottesville, Va., April 20.

JAMES STEPHENSON HOPKINS, M.D., Frederick county, Md., to Miss Elizabeth Finney Hopkins, at Belair, Md., April 19.

HARRY L. ROTHBLATT, M.D., formerly of Willimantic, Conn., to Miss Bessie Hurwitz of Boston, at Roxbury, Mass., April 14.

WILLIAM ALEXANDER MACDONALD, M.D., Windsor, Ont., to Miss Annie Elizabeth Goodchild of Craighton, Ont., at Toronto, April 13.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Regular; Little Rock, May 10-11. Sec., Dr. F. T. Murphy, Brinkley.
LOUISIANA: Regular; New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street.
MASSACHUSETTS: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.
MISSISSIPPI: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.
NEBRASKA: State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.
NEW YORK: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

College Merger in Oklahoma

From Oklahoma comes the report that the Epworth College of Medicine of Oklahoma City has been liquidated and in its stead the State University of Oklahoma School of Medicine will open a clinical department, thereby providing for a complete four-year course in medicine. The first two years will be given at Norman as heretofore, which is eighteen miles south of Oklahoma City. This leaves but one medical school in Oklahoma.

Proposed College Merger at Cleveland

Negotiations are under way for a consolidation of the Cleveland College of Physicians and Surgeons (Medical Department of Ohio Wesleyan University) with the Medical Department of Western Reserve University. It is understood that a part of the teaching staff of the former will become members of the teaching staff of the latter. Such students as have met the requirements maintained by the Medical Department of Western Reserve University may become candidates for the degree from Western Reserve; for other students, the instruction will be carried by Western Reserve and on completion of the course, such students will be graduated by Ohio Wesleyan University. No students will be admitted in advanced standing from other schools nor will any new matriculants be received except such as have the entrance requirements of the Medical Department of Western Reserve University, namely, a college degree or three years of college work with the assurance of having the work of the first medical year accepted by the college from which the student comes as completing the requirements for the bachelor degree. After this consolidation, the Medical Department of Western Reserve University will be the only regular medical school in Cleveland and northeastern Ohio. The arrangement is planned to go into effect at the close of the present college year.

Only One Medical School for Colorado

The Denver and Gross College of Medicine, organized in 1902 by the union of the Denver College of Medicine with the Gross Medical College, has merged with the University of Colorado School of Medicine. Then there will now be but one medical school in Colorado. This will doubtless result in a united medical profession in that state which will work as a unit for the passage of the amendment to the State Constitution to be submitted to the people this fall to permit the University of Colorado to teach medicine in Denver. Until that amendment is passed all teaching by the State University must be given at Boulder. It is planned to continue the first two or laboratory years of the course at Boulder, while the clinical years will be transferred to Denver.

Colorado January Report

Dr. S. D. VanMeter, secretary of the Colorado State Board of Medical Examiners, reports the oral and written examinations held at Denver, Jan. 4-8, 1910. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. Eleven candidates were examined, of whom 8 passed and 3 failed, including 1 osteopath. Thirty-nine candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Colorado	(1909)	86.9
Denver and Gross College of Med.	(1909)	75, 75.7, 81, 81.1, 81.3
University of Iowa, College of Homeopathic Med.	(1909)	89.4
Jefferson Medical College	(1909)	78.1

FAILED

College	Year Grad.	Per Cent.
Barnes Medical College	(1906)	70.4
Eclectic Medical Institute, Cincinnati	(1908)	60

REGISTERED ON CREDENTIALS

College.	Year Grad.	State Licenses.
Chicago Homeopathic Medical Coll. (1893) Iowa;	(1901)	Illinois
Rush Medical College	(1897)	Wisconsin
Northwestern University Medical School (1901) Iowa; (1902) Wisconsin	(1909)	Illinois
Bennett Medical College	(1909)	Illinois
Hahnemann Medical College and Hosp., Chicago	(1909)	Illinois
Keokuk Medical College	(1897)	Iowa
Coll. of Phys. and Surg., Keokuk..(1880) Iowa;	(1895)	Illinois
Keokuk Medical College, Coll. of Phys. and Surg.	(1906)	Iowa
Louisville Medical College	(1889)	Kentucky
College of Physicians and Surgeons, Baltimore	(1891)	Penna.
Baltimore Medical College	(1892)	W. Virginia
Detroit College of Medicine	(1897)	Iowa
University Medical College, Kansas City	(1896)	Kansas
American Medical College, St. Louis	(1892)	Illinois
Missouri Medical College	(1885)	Missouri
Washington University, St. Louis	(1905)	Missouri
St. Louis University	(1906)	Kansas
Kansas City Medical College	(1897)	Kansas
Beaumont Hospital Medical College	(1892)	Washington
St. Louis College of Physicians and Surgeons	(1891)	Missouri
University of Nebraska	(1907)	Nebraska
Omaha Medical College	(1894)	Nebraska
University of Buffalo	(1904)	New York
Columbia University, College of Phys. and Surg.	(1908)	New York
Miami Medical College	(1903)	Ohio
Eclectic Medical Institute, Cincinnati	(1896)	Penna.
University of Pennsylvania.....(1900) Penna.; (1900) Wyoming; (1892) New Jersey	(1909)	Maryland
Medico-Chirurgical College, Philadelphia	(1908)	Penna.
Memphis Hospital Medical College..(1895) Kentucky; (1898) Tennessee	(1908)	Mississippi
University of Paris, France	(1873)	California

Illinois January Report

Dr. J. A. Egan, secretary of the Illinois State Board of Health, reports the written examination held at Chicago, Jan. 19-21, 1910. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 52, of whom 31 passed, 17 failed and 1 withdrew. Three candidates did not complete the examination. The following colleges were represented:

PASSED

College.	Year Grad.	Total No. Exam'd.
Howard University, Washington, D. C.	(1909)	1
Bennett Medical College	(1909)	1
Chicago Homeopathic Medical College	(1886)	1
Chicago College of Medicine and Surgery	(3, 1909) (4, 1910)	7
College of Medicine and Surgery, Physio-Medical	(1910)	1
Northwestern University Medical School	(1894) (5, 1909)	6
College of Physicians and Surgeons, Chicago	(1907) (1908)	2
Rush Medical College	(1879) (1897) (2, 1909)	4
Keokuk Medical College	(1898)	1
University of Louisville	(1904)	1
St. Louis College of Physicians and Surgeons	(1909)	1
Cornell University Medical College	(1908)	1
University of the City of New York	(1895)	1
Hahnemann Medical College, Philadelphia	(1890)	1
University of Tennessee	(1906)	1
Vanderbilt University	(1909)	1

FAILED

College.	Year Grad.	Total No. Exam'd.
Bennett Medical College	(1909)	1
Chicago College of Medicine and Surgery	(1908) (1909)	2
College of Medicine and Surgery, Chicago	(1908) (1909) (1910)	3
Hahnemann Medical College and Hospital, Chicago	(1909)	2
National Medical University, Chicago	(1909)	2
College of Physicians and Surgeons, Chicago	(2, 1909)	2
Reliance Medical College	(1909)	1
Sioux City College of Medicine	(1906)	1
Hospital College of Medicine, Louisville	(1904)	1
St. Louis College of Physicians and Surgeons	(1909)	1
Meharry Medical College	(1907)	1

Kansas February Report

Dr. F. P. Hatfield, secretary of the Kansas Board of Medical Registration and Examination, reports the written examination held at Topeka, Feb. 11-12, 1910. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 18, of whom 7 passed and 11 failed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Johns Hopkins University	(1906)	91
Ensworth Medical College	(1909)	78
Barnes Medical College	(1908)	84
Washington University, St. Louis	(1909)	84
Lincoln Medical College	(1907)	76
Columbia University, College of Phys. and Surg.	(1907) 90,	91

FAILED

College	Year Grad.	Per Cent.
Bennett Medical College	(1909)	70
University of Louisville	(1909)	63
Kansas Medical College, Topeka	(1899)	72
Ensworth Medical College	(1908) 72; (1909) 49, 61,	73
St. Louis University	(1907)	64
St. Louis College of Physicians and Surgeons	(1908)	74
Kansas City Hahnemann Medical College	(1909)	70
University Medical College, Kansas City	(1908)	69

North Dakota April Report

Dr. H. M. Wheeler, secretary of the North Dakota State Board of Medical Examiners, reports the written examination held at Grand Forks, April 5-7, 1910. The number of subjects examined in was 14; percentage required to pass, 75. The total number of candidates examined was 12, of whom 11 passed and 1 failed. Six candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College.	Year Grad.	Per Cent.
Rush Medical College	(1901)	85
University of Minnesota. (1896) 90; (1900) 83;	(1909)	80
Hamline University	(1908)	76
College of Physicians and Surgeons, Baltimore	(1904)	81
Wisconsin College of Physicians and Surgeons	(1909)	80
Milwaukee Medical College	(1897)	80
Queen's University, Kingston, Ontario	(1909)	83
University of Toronto, Ontario. (1901) 88;	(1908)	88

FAILED

College.	Year Grad.	Per Cent.
Missouri Medical College	(1893)	72

LICENSED THROUGH RECIPROCITY

College.	Year Grad.	Reciprocity with
University of Southern California	(1905)	Illinois
Hospital College of Medicine, Louisville	(1897)	Illinois
University of Minnesota, College of Medicine	(2, 1908)	Minnesota
University of Michigan, Department of Medicine	(1907)	Minnesota
Cleveland Homeopathic Medical College	(1907)	Oklahoma

Society Proceedings

COMING MEETINGS

American Medical Association, St. Louis, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June 6.
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6.
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June 6.
Connecticut State Medical Society, New Haven, May 25-26.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Maine Medical Association, Bar Harbor, June 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Montana State Medical Assn., Hunter's Hot Springs, May 11.
Nat. Con. State Med. Exam. and Licensing Bds., St. Louis, June 6.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
Rhode Island Medical Society, Providence, May 31.
Texas, State Medical Association of, Dallas, May 10-12.
U. S. Pharmacopeial Convention, Washington, D. C., May 10.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

MISSISSIPPI STATE MEDICAL ASSOCIATION

Annual Meeting, held at Oxford, April 12, 1910

The President, Dr. D. W. Jones, Brookhaven, in the Chair

A request from Clay, Oktibbeha and Lowndes societies to be allowed to surrender their charters and form a tri-county (Clay-Lowndes-Oktibbeha) society was granted.

Dr. E. F. Howard, Vicksburg, announced that the membership now exceeded one thousand.

Discuss Vasectomy for Habitual Criminals

A resolution advocating that the association go on record as favoring vasectomy for criminals and defectives was seriously considered. Although the great importance of this procedure was recognized, the council stated that, in the present state of tangle in medical legislation, the introduction of this matter would not be advisable. Accordingly this matter was laid on the table.

Want the Southern Medical Association Made Branch of A. M. A.

Dr. W. W. Crawford, Hattiesburg, spoke in behalf of the Southern Medical Association, of which he is president, and at the close of his address the following resolution was passed:

> *Resolved*, That the House of Delegates of the Mississippi State Medical Association hereby instructs its delegates to the American Medical Association to request that the Southern Medical Association, with its present constitution and by-laws, be given recognition as the southern branch of the American Medical Association and that it be given voice in the House of Delegates.

Officers Elected

The following officers were elected for the ensuing year: President, Dr. J. W. Young Grenada; vice-president, Dr. G. C. Phillips, Lexington; secretary, Dr. E. F. Howard, Vicksburg (reelected); treasurer, Dr. H. L. Sutherland, Rosedale (reelected); delegate to the A. M. A., Dr. D. W. Jones, Brookhaven; alternate, Dr. J. B. Bullitt, University.

Inevitable Abortion

Dr. F. J. Underwood, Nettleton, reported a case of abortion due to gonorrheal endometritis and advised as to methods of handling abortions. In operative procedures he prefers the fingers to the curette. The cause should always be ascertained, if possible, in order to prevent a recurrence of the calamity.

DISCUSSION

Dr. E. L. Robertson, Sunflower: The first thing to do in a case of this kind is to determine whether or not we have inevitable abortion, and then determine how we are going to get rid of it. I use a curette and find that the woman will not be injured if it is properly used. I use the finger where the fundus is down low, but such cases are infrequent. I do not like packing the vagina and os. Hemorrhage may be making progress inside the uterus. If I pack at all I pack the uterus and then the vagina.

Dr. J. S. Ullman, Natchez: It may be necessary to open the uterus but in my experience the uterus opens too soon. This should be stopped if possible. The women should be kept perfectly quiet at all times. The finger is the only practical means; I have found no trouble in introducing the finger when the uterus is pressed down with the other hand.

Dr. G. S. Bryan, Amory: I think that the patient should be anesthetized. I have no difficulty in introducing the finger into the uterus. The curette often causes death by puncture.

Dr. W. W. Mathis, Orwood: I have had uniform success in these cases by emptying the uterus. A dull curette should be used.

Dr. B. H. Booth, Drew: I object to the use of the finger because it is almost impossible to sterilize the hand properly on such occasions. At least 50 per cent. of the cases in which the finger is used show bad results. It is much better to use the curette, and if we know how to use it there is no greater danger than in the use of the finger.

Dr. J. W. Barksdale, Winona: I think that it is impossible to introduce the finger. Pains should be taken to irrigate constantly, and when a large curette without a cutting edge is used there is no danger arising from its use.

Dr. G. W. Land, Louin: Both contentions are right. In town, where an assistant can be had, I find it practical to use the finger, but sometimes a curette must be used, especially in the country.

Dr. J. G. Gaither, Oxford: I have found no difficulty in introducing the finger into the uterus; gloves should be used.

Dr. H. H. Haralson, Vicksburg: In some cases it is possible to use the finger, and in some cases it is not. I think each case is a law unto itself. Unless there is a hemorrhage one should not proceed under twelve or twenty-four hours. I am convinced that there are some cases in which it is impossible to remove the débris with the finger, and that the use of the finger is sometimes absolutely brutal.

Dr. W. W. Crawford, Hattiesburg: A woman who has had one abortion has a tendency toward another. We must appreciate the fact that a large majority of these patients can be safely carried through. As an anesthetic, I use chloral in conjunction with morphin, and administer it by rectum. We should not think of performing abortion so long as the patient's general condition is good.

Dr. F. J. Underwood, Nettleton: I want to measure fingers with a few of the physicians here. I believe that the finger will reach the product of conception if the fundus be pushed down hard enough.

A Plea for Asepsis in Labor

Dr. R. M. Boyd, Houston, considered asepsis in labor and condemned the carelessness with which these cases are frequently handled. He considers that the midwife is not the sole sinner in this regard, but that physicians are prone to view the subject too lightly. An obstetrical case should be considered from an aseptic standpoint as much as is a surgical operation.

DISCUSSION

Dr. J. S. Ullman, Natchez: I believe that the hand can be thoroughly sterilized. Further, an ordinary cottage is perfectly safe if a room is set aside, prepared, and thoroughly cleaned. If the country practitioner will scrub his hands and sterilize them he will get at least as good results as his city brother in the hospital, if not better.

The Duty of the Family Physician as an Obstetrician and in Pregnancy

Dr. W. L. Little, Wesson, considered the importance and benefit of obstetrical work and advised methods looking to the care of the pregnant woman. Many of the discomforts and dangers of confinement may be obviated, he said, by proper care during pregnancy and the physician should watch and advise his patients constantly.

Care of the Expectant Mother

Dr. I. W. Cooper, Newton, said that the pregnant woman should be informed of those symptoms that forecast danger. He discussed the diet and general care of the pregnant woman and insisted on the necessity of frequent urinalysis.

Discussion on Care of Pregnant Women

Dr. John Y. Murry, Ripley: It is nice to think of curing diseases, but it is even better to prevent the diseases. An ounce of prevention is better than a pound of cure.

Dr. H. H. Haralson, Vicksburg: I do not think it good and safe practice to empty the uterus before convulsions; the result cannot be determined with accuracy in any particular case.

Dr. T. B. Holloman, Itta Bena: I want to emphasize the importance of the patient advising her physician as soon as she believes herself pregnant. Frequent examination of urine is also important.

Dr. W. L. Little, Wesson: I average about 75 such cases a year and have never had a death. I make it a rule to keep in touch with patients and keep them in good shape.

Dr. I. W. Cooper, Newton: I do not favor the plan of carrying the patient along, trying to get her through and then losing her.

Treatment and Cure of Cutaneous Cancer by the Escharotic Method

Dr. S. H. McLean, Jackson, has been using this method since 1898 and is firmly impressed with the benefits to be derived therefrom. He believes that one great trouble and a chief reason why results are poor is that treatment is half-hearted and not sufficiently thorough. He described methods of applications and several pastes that had done good service in his practice.

DISCUSSION

Dr. W. L. Little, Wesson: If physicians would follow Dr. McLean's advice they would meet with excellent results. The physician who takes up this work takes it out of the hands of the quacks who travel from town to town.

Dr. G. C. Phillips, Lexington: I have watched Dr. McLean's successful work for several years and after using his remedies in a number of cases I have had perfect success in several cases thought to be incurable.

Health Conditions in Bolivar County, Miss., with Mortality Report

Dr. H. L. Sutherland, Rosedale, discussed the importance of vital statistics and their commercial value to a community. He then described the improved condition of affairs in Bolivar county, especially as regards malaria. This is the doctor's third quinquennial report on the mortality of his county, which is in the part of Mississippi known as the Delta. He concluded with a tabulated mortality report, based on the white population, and a discussion of the health conditions especially regarding school children.

DISCUSSION

Dr. J. T. Longino, Jonestown: This question of vital statistics is of great importance, especially to those who live in the delta. We should get a basis on which we can work with some degree of correctness. Physicians in Coahoma county generally responded to requests for statistics; they get statistics on the negro as well as the white population, and as the negro's habits are much more insanitary than those of whites the statistics in that county do not compare favorably with those of Dr. Sutherland. Last summer there was a little typhoid fever—an epidemic in one locality—which was attributed to the typhoid carrier, the house fly. The usual small number of cases of typhoid fever in that county is due to the excellence of the water supply. A great improvement is evident in Coahoma county in respect to malaria, and this improvement I credit to the development of the country and the cultivation of land. Our people are becoming better educated in matters of this nature. They screen their houses, and are careful that there is no standing water near their homes. Many of them sleep under mosquito netting. Even negroes are doing this to some extent.

Dr. R. M. Boyd, Houston: Nothing has injured our country so much as malaria, and the legislature ought to give the State Board of Health sufficient funds to rid the country of this disease.

Dr. J. W. Gray, Clarksdale: Coahoma county I believe can compare favorably with any, and is, in fact, suitable for a health resort.

Dr. W. L. Little, Wesson: When Coahoma county gets a first-class town it will have typhoid fever. I made an investigation five years ago and the death rate was 14.9. Since that time the people have been told how to live so as not to contract malaria and other ills, and the death rate is now 14.6.

Dr. B. H. Booth, Drew: The population of my town is between 600 and 800, white and black, and there has been one death since August, 1907. All authorities will tell you that malaria is decreasing in amount and mortality. To-day there is little malaria, and the patients all recover. People wrongly judge the delta by former and not by present conditions.

Dr. A. A. Young, Oxford: I can recall only one death in the last fifteen years among the 300 school children in the Oxford schools.

Dr. E. A. Cheek, Arcola: The insurance companies wrote me a few years ago that they based their rate on the general reputation of the country. On comparison, I found the death rate the same in the delta as in the hill section. Fifteen or twenty years ago many people in my county died of malaria, but they are becoming educated in such matters now and take better care of themselves than do the people in the hills. Many of them sleep under mosquito bars, many screen their houses. Another reason for the low death rate in the delta is the fact that typhoid is rare and less severe in that section than in the hills. Tuberculosis is thought by some physicians to be less prevalent in the delta.

DR. J. B. MAGEE, Prentiss: I practiced in Bolivar county in 1896 and at that time I did not think there was a single case of typhoid, but now he thinks that there were several—they called it something else.

DR. H. L. SUTHERLAND, Rosedale: As a rule the white people are well informed on these matters. I was highly gratified to find the mortality for the years 1904 and 1909 so close—it made me feel more sure that my data were correct. I took pains to make this report absolutely correct. I had a young man go to every house and store with a book made especially for this work, and in this way I acquired all the information I wanted. The physicians helped me in this work. I investigated data personally and have been working hard on it since last year. I am perfectly satisfied that I know every person who died in Bolivar county in that time. On a plantation in that county where about 250 or 300 Italians were employed, I did not know the rate of mortality among them but the first year my bill was $900, the next year $650, the next year $450, and this year about $50 or $75. They have learned to take care of themselves.

Pneumonia: Cause, Prevention, Treatment

DR. T. B. HOLLOMAN, Itta Bena, discussed the various micro-organisms implicated in pneumonic cases and advised as to their avoidance. He emphasized the importance of rest in the treatment.

Eczema

DR. I. DYER, New Orleans, reviewed and criticized the usual habit of practitioners of diagnosing eczema without proper examination of the eruption, and the routine treatment of eczemas irrespective of type. The element of exudative catarrh in areas was dwelt on as the cardinal point in the disease. A classification of eczema was detailed, showing the relation of causes to variety and its location and distribution. Discussing treatment, he urged individualizing patients and treating the disease on common-sense principles, which consisted in not using salves for moist exudative eruptions but, rather, lotions or powders or compresses, as these would apply in the particular case.

Tuberculosis: Its Relation to State Medicine

DR. H. H. HARALSON, Vicksburg, considered the responsibility of the state in connection with this disease and urged state supervision along the lines of the greatest comfort possible for the patient while protecting the public. In order to secure such protection he contended that compulsory notification and registration are necessary and that pauper consumptives should become the charge of the state; home treatment and care of consumptives is preferable to institutional.

DISCUSSION

DR. H. L. SUTHERLAND, *Rosedale:* This is a question of great and growing importance. It is hard to tell how many negroes die from this disease; they live in such poorly ventilated houses; I have no doubt that for every negro who dies of this disease five are infected. Education seems not to do much good in this matter among the negroes and unless put under some control it seems as if the extinction of the race will follow. Dr. Wortemburg of Norfolk, Va., suggested curing the evil among the negroes by organizing for them antituberculosis secret societies. This plan was found to be worthless, on account of the negroes taking no interest in the society after the first meeting. Some plan like that suggested by Dr. Haralson must be adopted.

DR. J. B. MAGEE, Prentiss: The cause of a great amount of tuberculosis among the negroes lies at our own door because we fail to teach them the necessity of ventilation. During slavery the negroes had plenty of air and ventilation, and there was practically no tuberculosis among them. There is nothing in the world like fresh air—we ought to teach that to the people.

DR. H. H. HARALSON: I would like to impress the importance of notification and registration and that it can be done only on the requirement by the state. A mother would not employ a negro nurse for her children if she knew that the nurse was afflicted with tuberculosis.

(To be continued)

THE CITY OF WASHINGTON BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

Joint Meeting held April 6, 1910, with the Local Delegates to the U. S. Pharmacopeial Convention

General Principles to be Followed in Revising the Pharmacopeia of the United States

MR. S. L. HILTON, the president, reviewed the history, scope and authority of the Pharmacopeia and called attention to the need for concerted efforts on the part of physicians and pharmacists to make the U. S. P. IX a reliable and generally accepted standard for the articles which it contains. He further asserted that: In regard to the recognition of the U. S. Pharmacopeia IX, that is settled, provided the standards therein adopted are fair and reasonable and meet the conditions now provided for by law. It then becomes a matter of necessity for every delegate to this convention, which meets in Washington in May, to realize the seriousness of the situation and to be prepared to lend his best efforts in assisting the Committee on Revision to provide a Pharmacopeia that will meet every fair and reasonable requirement that is demanded of it under these new conditions. No doubt many attempts will be made to secure action that will favor special interests; in the past attempts have been made when the authority of the Pharmacopeia was slight and unimportant. This fact was brought out recently by the chairman of the Committee on Revision, and this being true, it is but fair to presume such attempts will again be made when more is at stake and more to be gained. We should prepare for any such emergencies by selecting only the best available men, whose previous records are beyond reproach, for members of the revision committee and the Board of Trustees, and by giving publicity to the work as it progresses for detecting errors not only of judgment, but intentional acts of deception. The eye of the public and of the honest allied interests are the best means to secure purity and accuracy in this great work. With the above facts and conditions taken into consideration, it is desirable that a reasonable sharp definition as to what should constitute the function and the scope of this work should be agreed on.

In concluding, he presented the following resolutions for the guidance of the delegates present and for subsequent submission to the United States Pharmacopeial Convention:

WHEREAS, It has been recommended that the Pharmacopeia of the United States be recognized and used as the basis for medicinal prescribing; and

WHEREAS, It has been recommended that medical colleges use the Pharmacopeia as a text-book, or book of reference for students; now, therefore, be it

Resolved: That the Pharmacopeia should be a compilation of the acceptable standards for desirable medicaments of known and recognized value; and be it further

Resolved: That the United States Pharmacopeial Convention, to be held in Washington, May 10, 1910, be requested seriously to consider the adoption of the following rules for general principles to govern admissions to and deletions from the Pharmacopeia of the United States:

1. That drugs which possess no well-recognized medicinal value be not included in the U. S. P.

2. That the duplication of drugs having essentially the same medicinal action be discouraged.

3. That drugs which are fully represented by an official active principle be omitted from future editions of the U. S. P.

4. That substances which are of but secondary importance as drugs and are used primarily as foods be not retained.

5. That whisky and alcoholic beverages be deleted from the U. S. P.

6. That substances which have no direct therapeutic value and are used as solvents or reagents be included in the appendix.

7. That the unnecessary duplication of pharmaceutical preparations, such as wines, vinegars, syrups, tinctures and fluidextracts of the same drugs be discouraged.

8. That the continuing of fixed formulas for complex mixtures be discouraged.

9. That all formulas for preparations that can be made extemporaneously be recommended for admission to the National Formulary.

10. That all complex preparations not provided for by international treaties be transferred to the National Formulary.

11. That further efforts be made to establish and to adopt international nomenclature and standards for drugs and preparations.

12. That compounds and mixtures permanently controlled either by secrecy or proprietary rights be not admitted to the U. S. P.

Dr. H. G. Beyer, one of the delegates to the U. S. Pharmacopeial Convention from the U. S. Department of the Navy, Bureau of Medicine and Surgery, in seconding the resolutions under consideration, expressed the belief that the recommendations were self-evidently reasonable and scarcely required further discussion. He pointed out that any departure from the old classical significance of the Pharmacopeia would amount to but one additional step into the therapeutic chaos in which we are already involved. He believes that any deviation from the original ideal of the Pharmacopeia would result in the more or less complete surrender of future drug administration to irresponsible commercial agencies, and that this would mean the undisputed sway of the nostrum evil with all of its attending dangers to the public, the pharmacist and the physician. He further expressed the belief that the Pharmacopeia would be useless as a guide unless its scope and purposes be made of value to both physicians and pharmacists, and the revisers of the book should be made cognizant of their responsibility and be urged to recognize that the Pharmacopeia should be a collection of drugs, medicinal compounds and preparations of recognized therapeutic value and of known strength. He also said that admission to the Pharmacopeia of any drug or compound of drugs should stand as the synonym for the general acceptability of the purity, value and composition.

Dr. Murray Galt Motter quoted from a paper by Torald Sollmann on the use of the Pharmacopeia as the standard for medical prescribing, and called attention to the general agreement of the views expressed in that paper with the aims and objects of a pharmacopeia as outlined in the Pharmacopeia of the Massachusetts Medical Society, published in 1806, and in the original Pharmacopeia of the United States published in 1820.

Dr. Reid Hunt, the chairman of the Committee on U. S. P. of the American Medical Association, called attention to the work being done by his committee to arouse interest in the U. S. P., and reported, in some detail, the consensus of opinions of professors of materia medica, therapeutics and pharmacology in medical schools. He pointed out that while there were but a comparatively few articles that were not objected to by some people a consensus of a fair majority of the opinions received would appear to offer a sound basis for the consideration of prospective deletions. So far as the vote on the resolutions under consideration was concerned, the majority of the replies received by him were in favor of endorsing them.

Dr. M. F. Finley, a prospective delegate from the National Dental Association, expressed himself as being pleased with the summary just presented, as the resolutions under consideration appeared to be formulated on correct principles and should be enforced.

Mr. M. I. Wilbert called attention to a number of communications, which he had received, bearing on the resolutions under discussion.

A communication from Prof. Joseph P. Remington commends the efforts that are being made to assist in framing a report on general principles for revising the U. S. P. Professor Remington says: "I feel that any help that can be given the Pharmacopeial Convention by discussion beforehand will be greatly appreciated and will save time in the Convention. I hope that when we get down to actual business in the Convention that time will not be frittered away in discussing minor details. In the past this has always been the trouble. Some one will get up and move that the quantity of glycerin be increased or decreased in the cataplasm kaolini, and if the presiding officer does not guide the Convention in these matters the big things will be hurried over and the little things will waste time." Mr. Burt E. Nelson, a writer on pharmaceutical subjects, expresses the hope that all obsolete and inert material will be eliminated from the Pharmacopeia in the next revision, so that the book will really be, as it should be, an authoritative list of substances useful to and used by physicians in the treatment of disease. Prof. H. V. Arny, Cleveland, believes that the only sane method of deciding what shall be official in the new Pharmacopeia is by statistics; that is, on lines already started by Professor Hallberg in his attempted compilation of one million prescriptions. Mr. Leonard A. Seltzer, Detroit, forwarded a communication enclosing a set of resolutions adopted at a joint meeting of the Detroit Association of Retail Druggists and the Wayne County Medical Society, covering essentially the same general principles as the resolutions now being discussed.

Dr. W. M. Barton, a delegate from Georgetown University Medical School, expressed the belief that constituted as it is the Pharmacopeia of the United States is neither desirable as a text-book for medical students, nor useful as a book of reference for the medical practitioner. He would favor deleting 65 per cent. of the now official substances, and believes that the elimination of all inert or useless substances from the Pharmacopeia would rob the nostrum maker of much of his present advantage. Thus he thinks that the deletion of the lithium salts from the Pharmacopeia would go far toward correcting a now widespread impression that the lithium ion is really a useful therapeutic agent; and, in conclusion, he expressed the hope that the next Committee on Revision would inquire carefully into the possible medicinal value of official drugs and have the courage to refuse recognition to all compounds that are demonstrated to be inert.

Dr. Lyman F. Kebler asserted that while he himself was impressed by the fact that there are but few really valuable medicinal agents, he nevertheless felt that the Pharmacopeia as now constituted was a valuable adjunct in the enforcement of pure food and drug laws. He pointed out that unless the Pharmacopeia supplied such standards it would be necessary to develop them independently.

The resolutions were adopted without a dissenting vote as representing the consensus of opinion of those present.

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy-seventh Annual Meeting, held at Memphis, April 12-14, 1910

(Concluded from page 1468)

The Surgical Aspect of Epilepsy

Dr. G. G. Buford, Memphis: Clinical results have demonstrated the fact that little or no good comes from operative procedures when two or more years have elapsed from the time of the injury even when there are prominent Jacksonian signs. In all head injuries followed by any degree of shock, loss of consciousness, mental confusion lasting more than a few minutes, or sensory or motor disturbance, a close examination should be made of the cranial bones, and proper surgical procedures instituted at once, if there is any depression or a continued mental, sensory or motor disturbance. Often the degree or extent of scalp wound is out of proportion to the amount of injury done to the cortex, and indications for interference are evidenced more by the brain disturbance than by the open wound.

DISCUSSION

Dr. Duncan Eve, Nashville: Surgical intervention for the relief of epilepsy is demanding more and more attention and surgeons are now trephining more frequently than formerly for the relief of this condition. By improved methods of technic it is now possible to go deeper than the cortex, if necessary, and remove portions of the dura by making a trapdoor in the ordinary manner and perhaps remove a large amount of bone, thus effecting relief or permanent cure.

Dr. Jere L. Crook, Jackson: Dr. Harvey Cushing of Baltimore, operated on our lamented member and friend, Dr. Happel, doing a decompression operation and removing a brain tumor which proved to be a glioma. Unfortunately, the result of the operation was not all that was expected and after Dr. Happel's return to Tennessee he never recovered his speech beyond a whisper.

Dr. John A. Witherspoon, Nashville: I saw Sir Victor Horsley operate in London last summer and the thoroughness of his work impressed me very much. One thing that struck me forcibly was the absolute indifference to the loss of brain substance. In one tumor case in which I saw him operate he must have taken out about two tablespoonfuls of brain substance, simply taking it out and throwing it aside and searching for the tumor. Horsley is a pioneer in this work. If surgeons can add anything to the treatment of epilepsy, which has been practically the *bête noir* of the profession for many years, they will have done more for the profession even than they have done in the abdomen.

Dr. G. G. Buford: Any injury below the cortex of the brain does not produce epilepsy but paralysis. Anything that destroys the cortex of the brain produces paralysis. Anything that aggravates an irritable center *in the brain produces contraction* of the muscles that get their nerve supply from that part of the brain. An important point is to make an accurate diagnosis of the location of the point of irritation.

Sprained Ankle

Dr. Duncan Eve, Jr., Nashville: For the past three years I have used a modified Gibney dressing. In its use and application the following points are to be emphasized: It limits the effusion of blood. It immobilizes the joint. It relaxes the muscles. There is uniform pressure. It prevents stiffening. It reduces the time of treatment. It produces a massage. It is a sure relief for pain.

DISCUSSION

Dr. Jere L. Crook, Jackson: My modification of the Gibney dressing differs in some slight particulars, but the general plan of treatment and the general methods are the same. After 10 or 12 years' experience with the modified Gibney method of treating sprained ankles, I can see no good reason for making any change.

Dr. R. S. Miller, Knoxville: There is no class of surgical conditions in which the surgeon must individualize more than in cases of sprained ankle. I believe one would make a great mistake by strapping every bad sprain of the ankle, for if this is done trouble is likely to follow. But there are cases in which, if they are *carefully selected, that treatment is ideal,* and the patient can get up and walk with comparative comfort. I want to emphasize one point in the treatment of the severe cases of sprained ankle where there is a great deal of effusion in the joint, namely, for the purpose of giving relief, besides hot application and a bandage, I would suggest the use of an ice-bag during the night.

Dr. S. T. Rucker, Memphis: Every severe sprain should be examined under an anesthetic and an examination made by the *x*-ray.

Treatment of Acute Otitis Media

Dr. G. C. Savage, Nashville: At the earliest possible moment treatment should be instituted. If the inflammation is due to any other cause than one of the eruptive fevers, and the diagnosis has been made before pus has formed, the following prescription may effect a speedy cure: chloroform fl.ʒi to iss; olive oil (pure), fl.℥i. This mixture should not be warmed as the heat would dissipate the chloroform. The ear should be filled by dropping the medicine out of the bottle and a folded towel should be placed over the ear, the patient lying *on the* other side. The medicine should remain in the ear for 30 minutes. A second instillation should be made in from 2 to 4 hours even if there has been no return of the pain. Usually if there has not already been pus formation the pain has been entirely relieved by the end of the half hour and may not return; however, its return should be guarded against by repeating the instillations as often as every 4 hours for 2 or 3 days. Should the chloroform not bring the relief desired at the first or second use, it should be discontinued, and the following combination should be substituted: atropin sulphate, gr. 1; morphin sulphate, gr. 10; boracic acid sol., fl.ʒi; distilled water, 1 ounce. From 5 to 10 drops of this mixture should be warmed and poured into the ear and should be allowed to remain at least one-half hour. During this time the ear should be covered with a warm folded towel. This instillation should be repeated every 4 hours for 2 or 3 days, even if the pain should not recur. The atropin mixture may be used from the first in any case. Either of these agents when begun early may cut short an inflammation without pus formation.

The following prescription should always be given for external application: tincture of aconite, fl.ʒi; tincture of iodin, fl.ʒii. This should be applied in front of and behind the ear once a day unless the skin becomes too tender. The following *should be prescribed for internal administration* when the patient is a child and the cause is either influenza or a cold; tincture of aconite, m. xxx; deodorized tincture of opium, m. xxv; sweet spirits of niter, fl.ʒiv; syrup of balsam of tolu, q. s., fl.℥ii; mix. The dose to be given while the fever and restlessness continue, is one teaspoonful every 3 hours. For this formula, which is very efficient, I am indebted to Dr. Woodson of Birmingham, Ala.

DISCUSSION

Dr. L. B. Graddy, Nashville: During the last 2 months there has been an epidemic of otitis media in Nashville, and I do not think I have seen more than 12 or 15 cases treated in the *manner mentioned* by Dr. Savage, and they were under treatment 8 or 10 days and in nearly all of them it became necessary, within a few hours after the last visit of the regular attendant, to incise the drum head and empty the drum cavity. This atropin, boracic acid and morphin mixture has been modified materially in the last 3 or 4 years. Before that time atropin and boracic acid were given as a specific in the prevention of aural troubles in scarlet fever, and it was stated before the Middle Tennessee Medical Association that it was almost criminal to permit ear complications in cases of scarlet fever; that they could easily be prevented by dropping into the external auditory canal a solution of atropin, that is, 10 grains of boracic acid, and 1 grain of atropin to 1 ounce of water. Since *then morphin has been added, I do not know* why. Ten days after the meeting referred to, a case of mastoiditis following scarlet fever was referred to me. The patient had been treated by a practioner who had used atropin and boracic acid very freely, the case showing that the mixture is not a specific.

Dr. T. J. Herron, Jackson: In cases of acute otitis media I use sprays and inhalations, and put the patient to bed, believing that the rest treatment is the best thing after all. When there is pain and sufficient trouble to cause inflammation the patient ought to be cared for just as much as if some other organ of the body were involved. The pain is due to cold or to an inflamed condition of the internal structure of the drum membrane and we should use some remedy that will relieve the pain. I generally use some hot solution.

Dr. O. Dulaney, Dyersburg: I have seen a number of cases of acute otitis media following influenza in elderly people and some have gone on to suppuration. The more quickly we get rid of the suppuration the better the results. Locally, I have used a solution of cocain, and then if I used anything else locally it was hot water bags. If it is not convenient to have that, I take a towel and ring it out of hot water and apply it to the ear. In some of these cases early inflation of the Eustachian tube will afford relief instantly. If the cocain does not give relief in a few hours, and if the inflammation and pain should return, the best thing to do is to incise the drum and get rid of the poison.

Dr. J. J. Waller, Oliver Springs: My experience in treating inflammation of the middle ear with local applications dropped into the external auditory canal has been unsatisfactory, and I believe these cases will go on to suppuration unless the drum is punctured and the exudate let out. If the local applications mentioned do not afford relief I *generally resort* to puncture of the anterior inferior quadrant of the drum.

Dr. C. V. Stephenson, Centerville: I have in mind a case I had two months ago. I was at a loss to know what the trouble was and my consultants did not know what the condition was. The patient was a little girl of 7, whom I was called to see one afternoon. The mother told me she had given the child some home remedies. I did not think there was very much the matter with the child. I made a second visit the next morning and noticed that the girl in speaking sentences would stop at the third or fourth word and repeat the last word three or four times and never finish what she wanted to say. She had no pain, but the temperature was 101 F. Respiration was not very good. I noticed in examining the throat, nasal passages and ears that there was a little inflammation of the internal ear, and the nasal mucous membrane was somewhat congested. There was slight frontal pain. The child in touching her brow complained of pain. On the third day a physician from Nashville was called who pronounced the case one of tuberculous meningitis. I did not concur in that diagnosis. The child drifted along for 2 or 3 days. Another physician was called and said it was meningitis, but not tuberculous meningitis. The child lay in a stupor, but the temperature never exceeded at any time 102 F., the respiration being from 40 to 50. On the tenth day of the illness a suppurative condition developed and there was a discharge both from the mouth and ear; the child died on the eleventh day of the disease. I was of the opinion that the child had some internal trouble, and I still cling to it, and that the stupor was due to some toxic condition.

Peptic Ulcer

Dr. M. C. McGannon, Nashville: More attention should be given to this disease than is accorded it at the present time. I call attention to the surgical treatment of this condition, because when we consider the great mortality which formerly followed operations of this character, general practitioners were warranted in procrastinating and adopting a waiting or expectant mode of treatment. But now, when the mortality is less than 2 per cent. in competent hands, this excuse no longer holds. I would not be understood as advocating surgical treatment in all cases of peptic ulcer, but when a complete cure cannot be obtained by medical treatment after a reasonable time, then I think the patient should be given the benefit to be obtained from surgical treatment.

DISCUSSION

Dr. Richard A. Barr, Nashville: The concluding remarks of Dr. McGannon are justified in that he advises in cases of persistent gastric ulcer that patients be given such relief as can be promised by surgical treatment, but we should be exceedingly careful in telling patients what we can promise them as the result of such treatment. Gastroenterostomy for gastric or duodenal ulcer is an indirect method of treatment, and while it may bring about temporary results, it does not effect a cure. If we treat gastric or duodenal ulcer surgically, we must treat it by removing the ulcerative process and inserting sutures. The Rodman operation of removal of the ulcer-bearing area is satisfactory. By that procedure we treat the ulcer surgically, and if we do a gastroenterostomy in addition to that, and the patient recovers, we may feel that we have actually done something surgically for the relief of that patient. Even at the operation it is not only difficult but sometimes impossible to locate the ulcer when present.

Dr. M. C. McGannon: At present, gastric or peptic ulcer is primarily recognized as a disease to be treated by the internist, and the patient is referred to the surgeon only when he has failed to effect a cure. That is the logical position to assume at the present time, but in the centers of medical teaching and medical work to-day this is fast becoming a surgical disease, and the surgeon sooner or later will have to deal with it.

Pneumonia

Dr. D. A. Walker, Trenton: Pneumonia is an acute infectious disease, and it is necessary to differentiate between croupous pneumonia and the other varieties. The disease may be divided into three different stages—congestion, red hepatization and grey hepatization or resolution. The physician should individualize each patient and make a thorough diagnosis in each case, noting the parts of the lung affected. Routine treatment is dangerous.

DISCUSSION

Dr. Herman Hawkin, Jackson: In considering the treatment of pneumonia we should treat the patient rather than the disease. We should avoid confining the patient in a closed room. We talk about the use of oxygen in the treatment of pneumonia in the later stages; why not give the patient oxygen all the way through? We can best get that from the atmosphere in the natural way.

Dr. John A. Witherspoon, Nashville: In the management of a case of pneumonia there are two considerations—toxemia and protection of the heart. If we can combat the toxemia until crisis occurs in true croupous pneumonia, and maintain cardiac integrity, we have won the battle. We should treat the individual and not the disease.

The Nervous Unfit

Dr. S. S. Crockett, Nashville: There should be a broader and deeper conception of the complaints of this class of patients, a conception which will carry the *diagnostician* beyond the consideration of local expression as an evidence of local pathology into the realm of mental control, where the seat of injury is often found in the loosening of that tie, which should normally bind the higher subliminal self to functional activity. These patients are certainly entitled to every means of relief that can be afforded—dietetic, medical, surgical and hygienic; but shall we stop there, abandoning that wide field of psychotherapy which is now holding such promise of development for the future? All therapeutic measures belong to the medical profession, and failure on the part of the physician to add mental therapeutics to other treatment is, in my opinion, largely responsible for the ever-increasing numbers of devotees to those false religions whose tenets are neither scientific nor Christian, but who adroitly swell their ranks and promulgate their false doctrines by practice of this principle, so long well-known, yet only recently being seriously put on a sane and healthy basis for the use of every practitioner.

The Diagnosis of Retroperitoneal Enlargements

Dr. W. H. Allport, Chicago, read a paper on this subject by invitation, in which he drew the following conclusions:

Educative method lies at the bottom of all diagnosis. The genius for surgical diagnosis is rarely anything more than systematized knowledge. Take no man's word in abdominal diagnosis. Do your own guessing, but do it scientifically. Recollect that abdominal diagnosis, like all applied knowledge, has its limitations, and it is more scientific to announce that they have been reached, than to confess an error later on. Probability is the rule of life, and the rule holds equally good between the ribs and the pelvis. Abdominal regions are for the students of normal anatomy; boundaries concern the surgeon and the pathologist. Displaced organs still move most readily toward their normal habitat. The growth of the abnormally enlarging organ is still apt to occur within the zone and fascial plane normal to that organ; such growth is usually along rather than across the normal cleavage planes, To the surgical pathologist the part of anatomy which is most profitably studied is that which concerns the distribution of fascias. Neoplasms are usually closely associated with organs, the irregular and atypical enlargements which follow fascias rather than organs are apt to be either secondary deposits or chronic suppuration, more likely the latter. In case of doubt never forget that arch deceiver, the cold abscess. Chronic suppuration is rarely recognized by the direct method; the rule is diagnosis by exclusion. Attention should be especially directed to the history sheet, the temperature chart, the blood count, and the urinary analysis report. Inflation of the colon by Ziemssen's method often enables us to assist diagnosis by crowding the tumor into one or the other space in front of or behind the posterior layer of the peritoneum. If the growth is found by this method to be retroperitoneal, study the kidney again by palpation, urine analysis, and the *x*-ray, and finally by metallic ureteral catheterization combined with skiagraphy as recommended by James Brown, and by Schmidt and Kolischer. The neglect to recognize and properly appraise hysteria is as frequently a cause of the miscarriage of diagnosis as is the failure to identify the cold abscess.

DISCUSSION

Dr. Battle Malone, Memphis: As illustrating the difficulty attending diagnoses, I recall a case I had several years ago. The only symptom of which the patient complained was constant excruciating pain which was referred to the lumbar region. After exhausting every method of diagnosis I frankly told the people I did not know what was the matter with the man, and they naturally asked for a consultant. The consultant made a diagnosis of tuberculosis of the spine. The symptoms of tuberculous spine were lacking. In the strength of the diagnosis made by the consultant the patient was sent West, and three months later died suddenly. Post-mortem examination revealed aneurism of the internal iliac artery.

Dr. **Bransford Lewis**, St. Louis: No contribution to medicine or surgery as a general thing is more valuable at the present day than that on the subject of diagnosis. I believe that in both medicine and surgery if we have fallen by the wayside it is because we have not advanced in diagnosis so rapidly as we have in the technic of surgery. A correct diagnosis cannot always be made by the symptomatology and the history of the case. The history or symptomatology with reference to renal troubles is notoriously misleading.

Dr. **Frank D. Smythe**, Memphis: A careful history of the case is most essential, and without it it is impossible to make even a probable diagnosis. If one is familiar with the progress and the natural tendency of diseases, a correct history will enable him to make a probable diagnosis in the great majority of cases. That must necessarily embrace a knowledge of the etiology of the disease, and especially does this apply to the infectious diseases, particularly those of an ascending nature from the genital tract and rectum. We should know also how metastases disappear or travel from one place to another, whether by means of the lymphatics, or the blood vessels, or by contiguity. A knowledge of these facts will help us greatly in arriving at a probable diagnosis.

Tumors of the Bladder

Dr. **E. M. Sanders**, Nashville: A symptomless hemorrhage means tumor of the bladder until excluded by the cystoscope. Palliative treatment should not be undertaken, and when the diagnosis is made a radical operation should be performed. All patients should be carefully examined with the cystoscope before operation. All tumors of the bladder should be considered malignant from the standpoint of the patient, and treated accordingly. The intraperitoneal route is the operation of choice in about three-fourths of the cases, but should not be used when in doubt, except by the most expert operators.

DISCUSSION

Dr. **E. M. Holder**, Memphis: Papillomas of the bladder become malignant on account of constant irritation. A papilloma of the bladder will take on a prostatic deposit that makes it hard to the finger, so that if one adopts the suprapubic route, he at once concludes that he has a malignant condition to deal with. The methods of diagnosis are intricate, and the handling of the cystoscope by the average practitioner is rather unsatisfactory. The first suspicion in a case of this sort is aroused when a history of bloody urine is given, and the physician at once concludes that he has to deal with a tumor probably of a papillomatous type. The next consideration is whether the tumor is benign or malignant, and on that diagnosis rests the further treatment. The method of operating will depend on the location of the tumor. Nearly all these tumors which I have seen have been above the trigone.

Dr. **Jere L. Crook**, Jackson: I saw Dr. Bransford Lewis remove a papilloma of the bladder last year. He used the cystoscope in making a diagnosis, and removed the tumor by the suprapubic route. The case was satisfactorily handled, all the way through.

Dr. **Bransford Lewis**, St. Louis: I am a firm believer in accurate and comprehensive diagnosis. If possible, an accurate diagnosis should be made first, and the mode of operation selected afterward. The removal of a pedunculated tumor from the bladder, together with its base, is successful in a considerable proportion of cases. A patient, 70 years of age, had an epithelioma removed from his tongue. The growth returned, and the tongue was again operated on with no return of the disease in that organ for four years, but a year after the last operation on the tongue there was a return of the growth in the bladder, which I removed three years ago, with no recurrence of the growth either in the tongue or in the bladder since that time.

Subphrenic Abscess

Dr. **A. B. Cooke**, Nashville: The only point of special interest connected with the operative technic is as to the best means of avoiding infection of the pleura in uncomplicated cases. Suturing of the diaphragmatic and costal layers, so as to enclose a circular or oval area, through which the incision is made, is recommended by some, but usually proves unsatisfactory because the tension and respiratory movement prevent the sutures from holding. Probably the most reliable method consists in securely walling off the pleural cavity on all sides with sterile gauze before opening into the abscess. Then, by first introducing a full-sized trocar, and partially evacuating the pus, the wall of the abscessed cavity may be seized with clamps and drawn out through the incision, thus obviating contamination. A large-size drainage tube, preferably double, should be securely sutured in position, and the protecting wall of gauze left undisturbed for two or three days. When adequate drainage is provided, the abscessed cavity will contract with remarkable rapidity. If deemed advisable, daily irrigations, with mild antiseptic solutions may be employed. However clearly the symptoms and physical signs may point to subphrenic abscess, the diagnosis should invariably be verified and the pus definitely located by aspiration before the operation is begun. Neglect of this precaution has resulted in embarrassing and dangerous mistakes even at the hands of the most competent surgeons.

A Plea for a Higher Standard of Medical Education

Dr. **Ambrose McCoy**, Jackson: A wonderful amount of good has been accomplished by the Council on Medical Education of the American Medical Association, and with its present organization and its list of able, effective and progressive membership, much more lasting good and advancement will be brought about. The Council should have the hearty support and cooperation of medical men, of medical societies and medical schools everywhere. Every one in a position to know acknowledges the need of elevating the standard of medical education in this state, and in the entire South, and we hail with delight those measures calculated to bring about the desired improvements. The profession at large must be on good terms with the schools and colleges, and the schools and colleges must be on good terms with the medical council, and the medical schools and the profession at large must do what it can to uphold and support and assist the state boards of medical examiners. They must be on friendly terms, and each have the help and cooperation of the other. Last of all, the public should be taught the necessity of this higher standard of medical education. It is the people who rule, and when they are taught the blessings that will follow the elevation of the standard of medical education, they will not only demand it, but will, knowing that the public welfare requires it, make laws effective to carry out such a purpose.

DISCUSSION

Dr. **Herman Hawkins**: The men who graduate from medical colleges should be equipped with at least a measurable amount of preliminary education, otherwise they are handicapped in their work, and it has a double effect in that it reflects on the school that sends them out, because they cannot in the time at their disposal acquire a literary education, and at the same time a medical education.

Dr. **John A. Witherspoon**, Nashville: In the last 7 years I have visited and talked on medical education in 28 states in this Union. I feel that the Council on Medical Education of the American Medical Association has done, and is doing honest, sincere work. I have been associated with the men on the Council, and I can honestly say that there has never been a disposition to do anybody harm, but to give everybody a fair show, and in every way to try and let the people know—especially those of our own beloved South—that they deserve just as good physicians and our schools are just as competent, and our professors just as capable to turn out men who understand disease, and who practice medicine in a scientific way as any other place on earth.

Dr. **B. G. Henning**, Memphis: I would like to see the standard of medical education raised as much as possible. The only fear I have is that the standard is going to be placed beyond the reach of many worthy men. When we speak of a high-school education and a four years' medical course, that is simple enough, but is that all? If so, why is it that 60 or 80 medical colleges in the United States will be barred from the association? I would not have you believe that I do not place a proper value on the elevation of the standard of medical education. I believe it ought to be raised, but, from a financial standpoint, is it possible for some of our worthy men to reach that standard? I am afraid that the standard is being raised so rapidly that we in the South cannot meet the pace.

Dr. G. G. Buford, Memphis: I have been connected with educational institutions more or less all my life, and the great bar to advanced medical education in the South is not among medical men, but in the fundamental education received in the country schools. Our education there is not enough. It is not in keeping with higher education. Boys come to use whose minds are not sufficiently trained to comprehend what we say to them. Their rudimentary education should be such as to enable them to comprehend what we say to them as medical students.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, *LEGISLATION, ETC.*

New York to Give Instruction to Health Officers

The New York State Department of Health has recently announced that it will inaugurate a course of lectures, laboratory exercises and demonstrations for health officers desiring modern training for public health service. The first course will be given May 9 to 14 next at the State Hygienic Laboratory at Albany, N. Y. This course is only open to health officers of the state of New York, and is offered free of cost for both instruction and apparatus.

The course consists of laboratory demonstrations from nine to twelve each morning on applied bacteriology and chemistry, covering such subjects as "Preparation of Culture Media," "Morphology of Bacteria," "Use of Cultures and Preparation of Colonies," "Isolation of Specific Germs," "Preparation of Toxins, Serums, etc," "Determination of Nitrogen in Water and Examination of Bacteria in Water, Milk, etc." Each afternoon, from 1:30 to 2:30, a public health lecture is to be given by some member of the State Department of Health, while from 2:30 to 5:30 p. m. each student performs in the laboratory the experiments covering the morning work. The afternoon lectures include the following subjects: "The Health Officer as a Sociologic Factor of Modern Civilization," Commissioner of Health Eugene H. Porter; "The Legal Duties, Responsibilities and Powers of the Health Officer of the State of New York," Deputy Commissioner of Health Alec H. Seymour; "Prompt and Efficient Quarantine: How to Establish and How to Release from a Quarantine," Director of Division of Communicable Diseases Dr. W. A. Howe; "The Safe Disposal of Excreta and Wastes," Chief Sanitary Engineer Theodore Horton; "Importance and Utilization of Vital Statistics in Modern Civilization," Director of Division of Vital Statistics F. D. Beagle. Arrangements have also been made for practical training in the actual work of inspection, diagnosis, quarantine, disinfection, etc., in connection with the quarantine station of the port of New York.

The course of instruction, as outlined above, while one which must necessarily be rudimentary and general, on account of the limited time at the disposal of those in charge, is, nevertheless, a most significant and hopeful sign of better things to come in the way of instruction for physicians who desire to take up the duties of health officers. The tendency of the times, toward prevention and state regulation of disease so far as possible, has been frequently commented on. The need of adequate training is evident. This need will increase in proportion to the demand for trained men to fill not only the positions now existing but the large number which will develop in the future.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. *JOHN H. BLACKBURN*, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—Fourth Weekly Meeting

Neuroses of the Upper Air Passages

Nose and Nasopharynx: Anosmia, hyperosmia, parosmia. Hay fever, etiology, pathology, treatment. Nasal hydrorrhea. Hyperesthesia and anesthesia.

Pharynx: Hyperesthesia, anesthesia and paresthesia. Xerostomia. Paralysis of muscles of pharynx and soft palate. Spasm of muscles of pharynx and soft palate.

Larynx: Hyperesthesia, anesthesia and paresthesia. Paralysis of laryngeal muscles; adductor paralysis, abductor paralysis, paralysis of tensors of cords. Spasm of laryngeal muscles; spasmodic cough, spasm of tensors of vocal cords, spasm of adductors (*laryngismus stridulus*).

Foreign Bodies in the Upper Air Passages

Nose: Diagnosis, treatment.

Pharynx: Fish-bones, pins, etc.

Larynx: Diagnosis, treatment.

Monthly Meeting

Diagnosis and Treatment of Tuberculous Lesions of the Upper Air Passages.

Pathology and Diagnosis of Purulent Infections of the Accessory Sinuses of the Nose.

General and Local Treatment of "Chronic Catarrh" of the Nose and Throat.

Book Notices

Practical X-Ray Therapy. By Noble M. Eberhart, A.M., M.S., M.D., Professor and Head of the Department of Electrotherapy, Chicago College of Medicine and Surgery. Second Edition. Cloth. Pp. 250, with illustrations. Price, $1.50. Chicago: New Medicine Pub. Co.

This manual is divided into two parts. The first one hundred and fifty pages are devoted to the general subject of *x*-rays and the following one hundred pages to its therapeutic use. It is more than a book on *x*-ray therapeutics, because it considers also the diagnostic use of *x*-rays, both by direct examination and by skiagraphs. The author first takes up briefly the physics of the subject and then a description of apparatus. The subject of physics is briefly but clearly considered and the description of the apparatus while short is satisfactory and practical. Two short chapters are given to the use of the fluoroscope and to skiagraphs. No attempt is made to go into the detailed diagnosis of different pathologic conditions. The chapters on the general principles governing the therapeutic action of *x*-rays are satisfactory; they show a well-grounded knowledge of the subject and an ability to impart it.

The one hundred pages devoted to the therapeutic application of *x*-rays to various diseases is necessarily concise, but it gives a good statement of the present state of our knowledge of this subject. No one can give a summary of the application of *x*-rays without speaking of their use in certain conditions in which they have been tried without rational grounds, but the author is no blind enthusiast; he is not carried away by his subject and indulges in no absurd claims. Altogether the book is an excellent manual of *x*-ray therapeutics and it is easy to understand why a second edition has been demanded promptly.

Teachers' Course, Department of Correspondence-Study, Bancroft Training School, Haddonfield, N. J. Course I, Physiology. By E. A. Farrington, M.D. Section A, Elementary Anatom and Physiology of the Nervous System. Paper. 1910.

This pamphlet is designed for the instruction by correspondence of teachers who have to deal with subnormal children. The definition of a subnormal child is given as one whose mental faculties are below the standard accepted as normal for the average child. The instruction is based on the principle that the teaching of subnormal children must recognize the following general principles: 1. Mental subnormality arises from organic or functional defects of the physical body. 2. The training should therefore aim to correct physical defects. 3. In the correction of these defects every possible method that proves in any way efficacious should be utilized. The course given in the pamphlet deals with the anatomy and physiology of the nervous system. The plan consists of a text of carefully graded descriptions or of assigned readings in designated text-books. Accompanying each lesson sheet is a recitation sheet containing questions, the answers to which are to be returned to the teacher by the student. An examination of the text and of the questions shows that the work is fairly thorough and designed to secure a good foundation for further study.

[illegible] DER ZAHNÄRZTLICHEN ORTHOPÄDIE. Von [illegible] D.D.S., in Berlin. Lehmanns Medizinische [illegible] XVI. Cloth. Price, 14 marks. Pp. 395, [illegible] Munich: J. F. Lehmann's Verlag, 1910.

This excellent work which includes regulation of teeth, treatment of nasal obstruction, prognathism, displacement of teeth, injuries of the face, etc., is based almost entirely on American methods of procedure. The appliances and their adjustment are distinctly American and the author (unlike many American authors) has given due credit for them. The work in some places, from an histologic standpoint—so unlike the German—shows the slipshod methods so common among American dentists. This is especially noticeable in Chapter 8, "Histologic Influence of Regulation." The study of histology by the use of the *x*-ray is so unscientific it should be condemned by all stomatologists. The perfection in appliances for the correction of deformed jaws and teeth is well displayed. The knowledge of the action of these appliances can be acquired only by those who have received a thorough medical education. The work is recommended to all German-reading students who are considering the practice of this specialty. The illustrations and presswork are commendable.

DIET IN TUBERCULOSIS, WITH COSTS OF FOOD AND THEIR PREPARATION. By Noel Dean Bardswell, M.D., and John Ellis Chapman, M.R.C.S. Paper. Pp. 62. Price, $1. New York: Oxford University Press, 1910.

This monograph is the result of researches begun by the authors to determine the principles on which the diet of tuberculous patients should be constructed and to determine a standard diet suitable to large classes of patients. The authors advocate an increase of protein above the physiologic requirement to the extent of 30 per cent., which is to be maintained until the disease is obsolete. At the same time the non-protein constituents are to be increased in the same proportion until the patient has regained his normal weight, after which they can be reduced. Diets for the working-class have to be constructed so as to afford the same amount of protein and energy in a cheaper form and need to be more bulky than ordinary diets. Diets for various conditions and for the tuberculosis of various organs are considered and instructions given for the cooking of food. In this way the book endeavors to cover the whole subject of the dietary relations of tuberculosis and the task has been performed in a very satisfactory way.

LEHRBUCH DER KRANKHEITEN DES HERZENS UND DER BLUTGEFÄSSE. Von Dr. Ernst Romberg, O. Professor und Direktor der Medizinischen Klinik in Tübingen. Second Edition, with 69 Illustrations. Paper. Pp. 573. [Price, in cloth binding, 14 marks.] Stuttgart: Ferdinand Enke, 1909.

In this new edition of this standard work no departure from the original plan has been attempted. Forty pages are added which are made up of sentences and paragraphs inserted here and there, bringing the work well abreast of the times. Its strong, clear and scientific discussion of cardiac disease will make it for a long time one of our authoritative treatises. The bibliography is one of the valuable features of the book.

In his preface to this edition Romberg sounds a note of warning against the danger of placing too much reliance on the graphic methods of studying the diseases of the heart to the exclusion of the older methods. He is inclined to think that the practical results of these methods, in particular the study of the variations in the venous pulse, have been overestimated by some. One must heartily endorse his plea for the employment of all known methods rather than the undue use of one to the exclusion of others.

RHINOLOGY. A Text-Book of [illegible] nd the Nasal Accessory Sinuses. By Patrick [illegible] Lecturer on Diseases of the Nose and Throat [illegible] of Bristol. Cloth. Price, $4.20. Pp. 273, with Illustrations. New York: Longmans, Green & Co., 1910.

This book, intended for practitioners and advanced students, is an amplification of a former work on Nose and Throat. The chapter on rhinitis seems rather short in its description of the simple and catarrhal forms, in view of the many cases of this class encountered and their importance as causative factors of complications involving other parts of the respiratory tract.

The chapter on chronic and atrophic rhinitis with the advancement of the various theories as to etiology, as well as the succeeding chapter on infectious diseases, is ample and thorough. Of particular interest are the chapters on inflammatory diseases and suppurations of the accessory sinuses and their treatment, the author here giving a résumé of many different methods of operative procedures, including his own. The book is well written and profusely illustrated and closes with 38 stereopticon plates that are of value in showing actual anatomical conditions.

GRAPHIC METHODS IN HEART DISEASE. By John Hay, M.D., M.R.C.P., Assistant Physician, Liverpool Royal Infirmary. With an Introduction by James Mackenzie, M.D., M.R.C.P. Cloth. Pp. 184, with Illustrations. Price, $3.00. New York: Oxford University Press, 1909.

In this book nothing is to be found concerning the examination of the heart by the ordinary methods of palpation, percussion and auscultation. It is intended solely as an introduction to the clinical study of disease of the heart by the aid of graphic instrumental methods. The beginner who is perhaps disheartened at his early attempts to study the various types of venous pulse, the extrasystoles or the epigastric pulsations, will here find help both in methods of using the instruments and in the interpretation of their records. He will naturally be led to consult the more extended writings of Wenckebach, Tigerstedt and Mackenzie. The latter writer is the inspirer of this little work by Hay, and has written a brief, yet interesting introduction.

The mechanical features of the book are excellent and the 128 illustrations are unusually well executed.

THE STOMACH, INTESTINES AND PANCREAS. The Medico-Chirurgical Series No. 2. By W. C. Bosanquet, M.A., M.D., Assistant Physician to Charing Cross Hospital and to Brompton Hospital, and H. S. Clogg, M.S., F.R.C.S., Assistant to Surgeon Charing Cross Hospital. Cloth. Pp. 665, with 110 Illustrations. Price, $4 net. New York: William Wood & Co., 1910.

This book includes the affections of the entire gastro-intestinal tract with the exception of the liver and covers the ground of surgery as well as of internal medicine. The surgical side seems rather to be emphasized. The treatment in general is concise and practical and leaves little to be desired on the score of accuracy. It is, however, surprising to see the advice given to pour in water if difficulty is experienced in obtaining the stomach contents for analysis. Such analyses can make no pretension to accuracy, even according to clinical requirement. On the whole, however, the book may be recommended as a reliable guide to the diagnosis and treatment of these important diseases.

POCKET THERAPEUTICS AND DOSE-BOOK. With Classification and Explanation of Actions of Medicines, etc. By Morse Stewart, Jr., M.D. Cloth. Price, $1 net. Fourth Edition. Pp. 263. Philadelphia: W. B. Saunders Co., 1910.

This little work has been rewritten, dead timber eliminated, and new drugs of approved value added. With its classification of drugs, doses and therapeutic indications, formulas for hypodermic medication and for inhalations, suggestions of drugs for various diseases, treatment of asphyxia, poisons and their antidotes, it contains in its 263 pages a mass of information compactly arranged for ready reference. The attempt to teach the Latin of prescription writing has not been entirely successful, owing to a number of misprints of case endings.

Medicolegal

Validity of Individual and Medical Society Contracts for Poor Practice

The Supreme Court of Iowa says, in the case of Brock vs. Jones County (124 N. W. R. 209), that a negro fell from a circus train passing through the state and had both of his legs crushed and mangled. It appeared from the record that the township clerk notified the township trustees; that two of the members appeared, and with the clerk took up the matter of caring for the injured man, and it was then agreed that the trustees should provide a place for the man, and that the plaintiff should render such medical services as he thought were necessary, and that they would sign and approve his bills. This was a sufficient meeting of the trustees, and a sufficient basis for the plaintiff's claim for medical attendance, unless there was something in the other defenses pleaded.

One of these latter was that no proper certificate of the plaintiff's employment was ever filed with the board of supervisors and that the bill filed by him was not certified to by the trustees. Two names were signed as those of trustees, but the terms of office of the parties had expired before they signed the certificate they did. But, after filing his claim, the plaintiff was twice before the board of supervisors with reference thereto, and at neither of those times, nor at any other, did the board or any of the members thereof raise any objections to the sufficiency of the certificate of the trustees, either in form or substance. On the contrary, they bottomed their action in disallowing the claim solely on the ground that they had a contract with the county medical association or society for doing the work. The court is constrained to hold that this conduct constituted a waiver of a proper certificate from the trustees. The statute is not mandatory in the sense that such a certificate is essential to an allowance of a claim by the board. In other words, payment or allowance by the board of a claim which is defectively certified cannot be said to be illegal or unauthorized.

But the court holds good the defense that, as the county had a contract with the medical society, of which the plaintiff was a member, for rendering medical attendance to the poor, the plaintiff could not recover for his services in this case. The plaintiff, however, to avoid the effect of his being a member of the society when its contract with the county was made and receiving his proportion of the proceeds, made two contentions: The first one was that the contract or arrangement with the board of supervisors was contrary to public policy, illegal, and void because the contract was not let to the lowest bidder, because no bond was given to secure the performance of the contract, because the plaintiff and the other members of the society had undertaken to create a trust or monopoly, and, second, because the contract did not cover services performed for a non-resident pauper.

The medical society was not incorporated, but purely a voluntary association. Yet the plaintiff was a member of it, and no claim was made that the secretary was not authorized to submit the bid for and on behalf of the society, while at a regular meeting of the society the proposition as accepted by the board of supervisors was fully ratified by the society. Having participated in all the acts of which he complained, having received some of the fruits of the contract or agreement, having induced and been a party to the contract, the plaintiff was in no position, after profiting thereunder, to say that the contract was illegal, to disavow and disown it, and claim that he should be reimbursed for services contemplated by the contract as if it had never been made. Moreover, the plaintiff was precluded from saying that the contract was illegal because not let to the lowest bidder, or because the society filed no bond as the statute requires. The contract was not void, although not let to the lowest bidder, and the failure to require a bond did not invalidate it. No such collateral attack as was here attempted will be tolerated or recognized.

Again, the plaintiff could not be heard to say that the bid or proposal did not meet the publication for bids, or was not accepted at a proper time. It was accepted and agreed to by both parties; and the plaintiff, after having recognized it and profited therefrom, could not in such an action as this repudiate it. No one will be permitted to take advantage of his own wrong, and to permit the plaintiff to recover on such a showing as was here made would be obnoxious to every principle of law or morals with which the court is familiar.

There was no merit in any of the first claims relied on by the plaintiff to defeat the contract or agreement. It was said, however, that the contract had no reference to non-resident paupers, and that the plaintiff might recover for services rendered them. There might be some basis for this claim if the statute read as it once did, but as it now reads it seems to cover all poor persons or all poor of the county, no matter where resident. The statutes taken together seem to indicate that the county is to take care of all the poor, although they may have no legal settlement therein. The remedy is to recover the amount expended from the county settlement. The fact that the poor person treated in this case had a settlement in Ohio was the same as if he were domiciled in a foreign country and he was a poor person of the defendant county within the meaning of the law.

The medical society undertook to take care of the poor practice in the county, and to this agreement the plaintiff should be held. When the board of supervisors has employed physicians to do the work the trustees cannot employ others to do the work, and they certainly cannot employ one who is bound to do it and give him an enlarged compensation.

Implied Authority of Foreman to Employ Physicians for Injured Worker

The Court of Civil Appeals of Texas recently had in Texas Building Co. vs. Drs. Albert & Edgar, 123 S. W. R., 716, what was apparently the first case for decision in that state involving the question of the implied authority of a foreman of a company to employ physicians or surgeons to attend an injured worker. The company, which had its headquarters at a distant city, was engaged in the construction, with a crew of men under the foreman, of a storeroom in the yards of a railroad. The employee in attempting to move and then stop a car loaded with brick, which he had been sent to help unload, was run over and so badly injured that his legs had to be amputated and death ensued in a few days. Some one, but who was not discovered, summoned by telephone this firm of physicians. The foreman, who said that he would have called them himself if it had not already been done, urged them to do all in their power for the man, suggesting that they employ a specialist, if in their judgment it became necessary to do so, and quieted the distressed family with the assurance that he would see that anything that was needed would be paid for. One of the physicians, knowing that both the foreman and injured man were employees of the building company, relied on the conduct of the foreman and was induced to render the services by reason of what was said and done, supposing that the company would pay therefor, though no direct promise of payment was made by the foreman.

No greater emergency, the court says, could have existed than that disclosed by this record for prompt action and attention to the injured man. The duty to render this attention and service was imposed on some one, and, the court thinks, under the circumstances, the company was properly charged with this duty, and that its foreman, its only representative at the time, was authorized to do whatever was necessary to alleviate the injured man's sufferings; and it seemed, from what was said and done by him, that the physicians reasonably believed that he had the authority to employ them and bind the company to pay for their services. The question then arose: Did he have this authority? This court is inclined to believe that, whenever a company employing laborers sends them out under the supervision and control of a foreman, it clothes him with, at least, the implied authority and power to do, not only such things as may be incident to the work in hand, but all things that might be necessary for the advancement of the master's interests. Here the servant was seriously injured in the direct line of his employment. Surely it was to the master's interest that the servant should have medical attention, to the end that he might be the better enabled to perform the master's service; and, outside of the doctrine of humanity, this court is inclined to the view that its decision in this case (affirming a judgment in favor of the physicians) can also be rested on the implied authority, on the part of the foreman, in the absence of the master, to act for the master and procure the necessary medical aid for the injured employee, and that the foreman in so doing created a liability against the master for the services of the physicians, for which they were entitled to recover.

The principles of justice and the dictates of humanity, in the court's judgment, as well as the law, imposed on the company, under the circumstances disclosed by this record, the duty to furnish the wounded man medical aid; and the foreman acting for it, in the absence of any higher authority, had the implied power to bind the company for the payment of the services of the physicians whom he had employed.

Railway Company Maintaining Hospital Department Held Possibly Liable for Malpractice

The Court of Civil Appeals of Texas says, in Zumwalt vs. Texas Central Railroad Co. (121 S. W. R. 1133), that it feels no inclination to disagree with the great weight of authority to the effect that, where a railroad company or person undertakes as a pure charity to furnish medical treatment to a sick or injured person, the duty of such company or person requires only the exercise of due care in the employment of a prudent and careful physician, and that such company or person cannot be made liable beyond this for negligence on the part of the physician. But it seems to the court a misnomer to designate as a pure charity a railway company's conducting a hospital department where it agrees to furnish its employees medical and surgical treatment in case of sickness or injury during employment for a certain sum to be deducted each month from their wages and the employees have no control over the fund or the employment of the physicians or other attendants, etc., although for the time being all deductions may be applied to the payment of the physicians or surgeons.

The fact that it does not appear that there is a distinct pecuniary profit in the conducting of the hospital should not be deemed conclusive. As an incident to the company's main business it may be deemed to be otherwise beneficial and profitable. The court would feel a hesitancy in saying that as so incidental to its business as a railway carrier it is outside of the scope of its corporate powers to maintain a hospital department. Aside from charitable purposes, for which railway companies are not recognized, it may be said to be in the pecuniary interest of such a company to maintain a state of health and capability among its employees as instrumentalities of its business. Why should it be said that this is in no sense of profit to the company? True, perhaps, no direct pecuniary benefit is received, but the same may be said to be the case in the conduct of its machine shops and other departments, where its insensate physical properties are repaired when injured. At least it would seem that it was for the jury, and not the court, to say, from all the circumstances, including its general plan, whether the hospital department was conducted as a mere charity and not for profit.

While it has been said that charity "covereth a multitude of sins," the court does not think this mantle should be used to hide the wrongs, if any, of which the plaintiff complained, namely, negligence in the treatment of his eye by a surgeon of the defendant's hospital department, if in fact committed under the circumstances and with the agreement as to furnishing medical treatment for the deductions from wages as alleged by him.

Death from Septicemia After Removal of Fish Bone from Rectum

The Supreme Court of Iowa says, in Jenkins vs. Hawkeye Commercial Men's Association (124 N. W. R. 199), that the insured, feeling a severe pain in the rectum, cleansed his hand, and, putting vaseline on his finger, inserted it and withdrew the rib of a fish 1½ inches in length, and as large as a darning needle, tapering toward the end. Upon extracting his finger it and the bone were bloody. On an examination the following day a physician discovered laceration of about three-eighths of an inch in length inside of the rectum and through the mucous membrane. Dropping a bit of absorbent cotton into a solution of equal parts of chloral hydrate, tincture of iodin and carbolic acid, he touched the wound with it, and advised the patient that he saw no cause for apprehension of serious danger, but that he should not move about more than necessary. The next day the man returned, complained that he had been obliged to attend to some business, was suffering pain, and asked for something to relieve him, which was given, with advice to remain at home. The day following that the physician found him in a high fever, unable to pass urine, with the parts surrounding the anus swollen and suffering great pain. Death ensued, said by the physician to have resulted from blood poisoning due to infection from the fish bone or the man's finger in removing it.

The court is of the opinion that the facts recited showed the death to have been the result "of external, violent and accidental means," within the meaning of his certificate of insurance. The decisions in various cases, the court says, proceed on the theory that the design of this provision of the policy is to guard the insurer against a liability on a fraudulent claim of the insured for indemnity for bodily injuries of which the only evidence might be the word of the person, and that, as the terms of the policy are to be construed most strongly against the insurer, the means coming from outside the body, though the injury be internal, should be regarded as external.

There was no evidence of how the fish bone came to be in the rectum, and therefore it is presumed that it reached there in the ordinary course of nature, as other excretions—through the alimentary canal. If it was likely to cause injury, then, as the insured is presumed to have given heed to the instincts of self preservation, it is not to be inferred that he swallowed the bone voluntarily. But, regardless of whether in eating fish he might have carelessly swallowed the bone and all, it is to be said that indigestible materials ordinarily pass out of the system without injury or inconvenience. That this bone caught in the rectum and inflicted the wound was so out of the ordinary course of things as to constitute an accident. The effect was one which does not ordinarily follow, could not reasonably have been anticipated, and cannot be charged to have resulted from design. Manifestly, then, it was within the well-recognized definitions of accident. Nor is this conclusion obviated by the circumstance that death resulted from septicemia or blood poisoning. Without the accidental wound by the fish bone, blood poisoning would not have ensued, and therefore the disease was incidental to the wound.

Current Medical Literature

Medical Record, New York

April 23

1 [illegible] iosis of Gall-Stones and Diseases of [illegible] . Roth, New York.
2 [illegible] perations for Prostatic Obstruction. [illegible] 'ork.
3 *[illegible] and Seventy-Two Hour Pneumonias in Children. LeG. Kerr, Brooklyn.
4 Conceptual Factors in Vertigo and Nystagmus. P. Fridenberg, New York.
5 *Hip-Joint Disease. J. A. Wyeth, New York.
6 Duodenal Ulcer with Perforation Accompanied by Chronic Appendicitis. H. W. Austin, U.S.P.H. and M.-H.S.
7 *Electric Anesthesia. M. M. Johnson, Hartford, Conn.

3. **Pneumonia in Children.**—Kerr gives examples of pneumonia in children, in which, with typical pneumonic symptoms, the course of the disease was so shortened as to cast doubt on the diagnosis of lobar pneumonia. He believes that when there are symptoms of sudden onset, the high temperature, early prostration, increased respiration with the pulse-respiration ratio changed, and the physical signs definite, with initial vomiting and chill, we are justified in making the diagnosis of lobar pneumonia, and of sustaining it even with a duration that is less than normal.

5. **Hip-Joint Disease.**—Wyeth reports a case of hip-joint disease occurring at the age of 3 years, in which the patient recovered so completely after wearing a long hip splint that at 14 years he ran 5 miles in 32½ minutes.

7. **Electric Anesthesia.**—In the case cited by Johnson, the anesthesia was obtained by the use of storage batteries sending a current through electrodes placed over the nerves supplying the tissues to be anesthetized. The negative electrode was applied over the sacrum, and three positive ones over the anterior crural, anterior tibial and posterior tibial nerves. The capacity of the storage batteries was 100 amperes, and

the current was interrupted from 6,000 to 7,000 times a minute. Anesthesia began as soon as the electrodes were applied, and there were no bad effects, the patient sitting up in bed two hours after the operation. The patient felt absolutely no pain, even when healthy tissue was incised.

Boston Medical and Surgical Journal

April 21

8 Harvard Medical School in 1788-89. D. Heald, Boston.
9 Treatment of Cervical Rigidity in Obstetrics. N. R. Mason, Boston.
10 *Treatment of Acute Dysentery by Intestinal Irrigation with a Five Per Cent. Solution of Silver Nitrate. H. F. Hewes, Boston.
11 *Depressed Fracture of the Malar Bone: A Simple Method of Reduction. E. A. Codman, Boston.
12 Avulsion of the Patellar Tendon, with Report of Case. D. P. Penhallow, Boston.

10. **Treatment of Acute Dysentery.**—Irrigation with silver nitrate has been recommended before and used more or less widely in the treatment of dysentery. The only independent element of Hewer's procedure was the use of a stronger solution than has commonly been used by those physicians who have heretofore employed this method of irrigation. In 10 cases the treatment was instituted at an early stage, from the second to the fourth day of the disease, as so judged by the appearance of symptoms. No protracted cases developed. The average duration of the cases was 10 days; the maximum duration seen in one case, 14 days. The details of the treatment used in this series of cases are as follows: The patient when first seen was given a dose of magnesium sulphate. As soon as this drug had acted, irrigation by silver nitrate was given. The rectal tube was inserted from 8 to 12 inches and a pint or more, according to the capacity of the patient to hold the solution, of 5 per cent. silver nitrate was injected. The injection was retained by the patient as long as possible, up to a half hour. Defecation was then allowed. Rectal injections of salt solution were given regularly after each movement during the course of treatment. A second injection of silver nitrate was, as a rule, given after a period of 2 days. In some cases one injection only was used. A diet selected with the idea of reducing the amount of fecal food residue was given. The daily content of this diet was as follows: Lean meat, 300 gm.; three slices of toast with maple syrup; albumin water consisting of the white of 8 eggs in water. This was continued for 5 days. The diet was then increased by the addition of more toast, butter, tapioca, potato juice and macaroni.

11. **Reduction of Fracture of Malar Bone.**—In three cases Codman has used the following simple method with complete success: Firmly grasp the bone through the swollen tissues of the cheek with bullet forceps in the manner an iceman holds a cake of ice. The upper prong of the forceps is first inserted just back of the orbital rim and the lower through the cheek below the prominent part of the malar bone and a firm pull made on the scissor-like handles of the instrument. The bone comes up into place with surprising ease and tends to remain in position when once reduced. No dressing is necessary as the two punctured wounds in the skin made by the points of the forceps are negligible.

New York Medical Journal

April 23

13 The Present Status of Medicine and its Outlook. G. F. Butler, Wilmette, Ill.
14 The Teaching of Anatomy in Medical and Dental Colleges. G. F. Kleinschmidt, Milwaukee.
15 Dreams and their Relation to the Neuroses. A. A. Brill, New York.
16 *Pulmonary Tuberculosis with Late Wassermann Reaction. A. P. Francine, Philadelhia.
17 Lobar Pneumonia. J. V. Shoemaker, Philadelphia.
18 Fracture of the Base of the Skull, Compound Fracture of Zygoma, Hemiplegia; Osteoplastic Flap Operation over Motor Area: Complete Recovery. M. S. Kakels, New York.
19 Sphenopalatine Ganglion (Motor, Sensory, Gustatory). G. Sluder, St. Louis.
20 Amygdalotomy or Amygdalectomy: Which Shall it be? J. Solow, Brooklyn.
21 The Cammidge Reaction in the Urine (concluded). J. M. Swann and J. J. Gilbride, Philadelphia.

16. **Late Wassermann Reaction.**—Francine's case is of clinical interest for the following reason: The patient contracted a chancre and bubo in 1866 while in the army; he was invalided for three months, during which time he received a course of mercurial inunctions and returned to active service. Since, he has had no syphilitic manifestations whatever, while to-day, after 44 years, he gives a marked reaction to both Wassermann and Noguchi reactions. A second patient gives a markedly positive Wassermann reaction from an infection 33 years ago, and has been and is without tangible symptoms of syphilis.

Lancet-Clinic, Cincinnati

April 2

22 [illegible] Freud—A Review of Psychotherapy. R. W. [illegible]
23 [illegible] Year in the Medical School. J. Medbury, Columbus, Ohio.
24 Tuberculosis and its Prevalence in Cincinnati. B. F. Lyle, Cincinnati.

Northwestern Lancet, Minneapolis

April 1

25 Obstruction of the Bowels. A. T. Mann, Minneapolis.
26 Cooperation Between the State Medical Society and the Boards of Health Throughout the State in Matters Pertaining to Legislation. W. L. Beebe, St. Cloud, Minn.
27 Differential Diagnosis of Diseases Causing Gastric Disturbances. C. Graham, Rochester.
28 The Typhoid Situation in Minneapolis. H. M. Bracken, Minneapolis.
29 *Malformation of the Rectum. C. D. Harrington, Minneapolis.

29. **Malformation of Rectum.**—A thorough examination of the lower bowel was made by Harrington with a pneumatic proctoscope. When the rectum was fully distended with air, a diverticulum on the anterior side of the rectum could plainly be seen, about 3 inches in diameter and 4 inches long. The sigmoid, instead of being curved, continued from the rectum in a straight line into the abdominal cavity. The patient had always suffered from constipation, and lately had had a great deal of discomfort from hemorrhoids.

Kentucky State Medical Journal, Bowling Green

April 1

30 The Iodids, Mercury and Arsenic. G. J. Herman, Newport.
31 Coal-Tar Products; Which and Why? W. R. Moss, Clinton.
32 *Fat Embolism. W. H. McCracken, Louisville.
33 The Diseased Inferior Turbinate. W. B. McClure, Lexington.
34 Modern Stomach and Intestinal Lore. R. M. Rankin, Covington.
35 Scarlet Fever. B. J. Overall, Coxs Spring.
36 Complications of Scarlet Fever as Seen in the Treatment of Diseases of the Eye, Ear, Nose and Throat. A. O. Pfingst, Louisville.
37 Catarrh of the Upper Air Passages. W. A. McKenney, Fairmouth.
38 Drugless Therapeutics. J. A. Young, Hopkinsville.
39 Prophylaxis. J. R. Scarborough, Clinton.
40 Diagnosis of Tuberculosis Apart from Physical Signs. W. Litterer, Nashville.
41 Etiology and Treatment of Lobar Pneumonia. D. H. McKinley, Winchester.
42 Diphtheria—Prophylaxis and Treatment. O. B. Demaree, Frankfort.
43 Adenoids—Cause of Deformed Alveolar Arch. J. D. Kisner, Lexington.
44 Influenza. W. A. McKenney, Falmouth.
45 Tumor of the Parotid. J. G. Sherrill, Louisville.
46 Acne Treated by Staphylo-bacterin. H. E. McCord, Ludlow.
47 Influenza. J. E. Fox, Marion.

32. Abstracted in The Journal, Nov. 13, 1909, p. 1682.

The Military Surgeon, Washington, D. C.

April

48 Esperanto. F. M. Munson, U. S. Navy.
49 What is the Most Effective Organization of the American National Red Cross for War: What should be its Relation to the Medical Departments of the Army and Navy? W. C. Rucker, U.S.P.H. and M.-H.S.
50 Personal Hygiene and Camp Sanitation and the Respective Duties of the Line and Medical Officers in Regard Thereto, and the Necessity of Early Discovery and Removal of Persons Infected with Communicable Disease. W. G. Bissell, Medical Corps, N.G.N.Y.
51 The Value of Camps of Instruction for Medical Officers of the National Guard. H. W. Jones, U. S. Army.
52 Laboratory Work at the Army General Hospital, San Francisco. P. M. Ashburn, U. S. Army.
53 The Bacteriology of an Epidemic of Bacillary Dysentery. J. M. Phalen and E. D. Kilbourne, U. S. Army.

Surgery, Gynecology and Obstetrics, Chicago

April

54 *"Erosio" Portionis Vaginalis Uteri. F. L. Adair, Minneapolis.
55 Experiments on Omental Adhesions. H. Neuhof and S. Wiener, New York.
56 Recent Advances in Treatment of Nephrolithiasis. D. N. Eisendrath, Chicago.
57 *The Fatty Fascial Flap in Plastic and Other Operations on the Pelvis of the Kidney. W. J. Mayo, Rochester, Minn.
58 Chorioma. J. Ewing, New York City.

59 *Carcinoma of the Pancreas. A. H. Ferguson, Chicago.
60 Growth of Bone against Resistance. N. Kerr, Chicago.
61 Mistakes in Diagnosis Relating to the Urinary Tract in Women. J. C. Webster, Chicago.
62 Perigastric Adhesions Simulating Pyloric Stenosis in Infants. C. G. Grulee and J. E. Kelley, Chicago.
63 Acute Diffuse Suppurative Peritonitis from a Ruptured Pus Tube. J. W. Bovee, Washington, D. C.
64 Suprapubic Prostatectomy. L. L. McArthur, Chicago.
65 *Raffia Ribbons as Drainage Material. S. E. Newman, St. Louis.
66 *Removal of Tumors of the Pituitary Body. A. B. Kanavel and J. Grinker, Chicago.
67 *Nail Extension in Fractures. W. Anschütz, Kiel, Germany.

54. **Erosion of the Vaginal Portion of the Cervix Uteri.**—As the result of a detailed clinical and pathologic study, Adair concludes that pregnancy seems to be an important factor in the development of erosions because they occur so frequently in that condition. The labor with its attendant injuries gives a splendid chance for infection and the devolpment of an erosion. Inflammation is the most important factor in the origin as well as the extension of the erosion; all of the other things are accessory. The basal layer of the squamous epithelium appears to be the first of the epithelial layers to die as a result of the underlying inflammation. This points definitely to a cause working under the epithelium, and while many other factors may enter into the formation of an erosion, this one certainly cannot be ignored.

Hemorrhages under the epithelium are often associated with the inflammatory process and this raises it from supporting tissue and helps in throwing it off. The newly formed squamous epithelium extends outward from the margins of the erosion over the denuded surface. It is perfectly reasonable to expect that it might come from epithelial islands or from mother cells, but Adair was not able to find proof of this. The glands under the squamous epithelium and under the erosion originate from various sources. They may come from glands which were normally present in the individual which includes those of congenital origin. The outgrowth of glands under the squamous epithelium of the portio accounts for some of them; this is especially noticeable in the softened tissue of the pregnant uterus or in that softened by inflammation. Cysts arise from the shutting off of outgrowing glands or from a stopping of their openings with squamous epithelium. In one case Adair saw papillary outgrowths from the surface which were partially covered with columnar epithelium. In another case he saw a marked papillary growth in the lumen of a gland but it had not broken through to the surface. The process of healing is accomplished by the growth of granulation tissue. The glands disappear in various ways.

57. **Fatty Fascial Flap in Operations on Pelvis of Kidney.**—The fine-grained fat lying in the fascia which is closely attached to the kidney, especially about the sinus and pelvis (inner layer of fatty capsule), Mayo finds is very valuable as a covering after operations on the pelvis of the kidney, and as a means of protecting the suture-line in the pelvis of a kidney which has been opened for the removal of stones. The plan of utilizing a fatty fascial flap has been employed for the last three years or more by Mayo, and in the patients operated on there has been no leakage of urine, even when the suture coaptation was imperfect. In using the fatty fascial flap it is not necessary to suture it closely, but merely to place it over the point to be protected and hold it in place with 2 or 3 catgut sutures applied in such a manner as to keep the parts in apposition. The fatty capsule is stripped from the kidney to the extent necessary to free the organ, and a fatty fascial flap raised either before or after making the working incision in the pelvis. After the operation is complete, the flap is placed in position and held by a few catgut sutures; the kidney is replaced and drainage secured by folded strips of rubber tissue, not with gauze, as that might lead to secondary fistula.

59. **Carcinoma of Pancreas.**—The case reported by Ferguson presents some points of interest. There was no gall-bladder; instead there was a small pouch about the size of a thimble, so that Courvoisier's law did not pertain in this case. This was probably due to the fact that the patient had suffered more or less from what was supposed to be cholelithiasis for many years, and the gall-bladder had evidently then become contracted. The carcinoma in this case was situated in the head of the pancreas. It involved the ampulla and had extended into the duodenum. The patient, a man, when first seen was complaining of considerable distress in the region of the gall-bladder, with pain radiating into the back, and rather persistent; he did not call it an unbearable pain. There were no attacks of hepatic colic. The illness began suddenly with a gradually deepening jaundice, intolerable itching of the skin, increasing weakness, rapid loss of weight, gastrointestinal disturbances, such as anorexia, constipation, indigestion, and clay-colored stools. He complained most of the nervous disturbances, a great restlessness, with mental depression and insomnia. His trouble began 13 years before, with symptoms of indigestion and hepatic colic. He had several attacks in two years. In 1897 he had a very severe colic, and for the first time was jaundiced. He was ill for a month, but no diagnosis was made. In 1899 he had hepatic colic, with jaundice and fever; his case was then diagnosed as one of gall-stones. On Feb. 7, 1902, he had a severe attack of nervousness, but no colic and no jaundice, which came on while he was at work, and the distress became so great that he had to be taken home in a carriage. As soon as he reached home he had a severe chill, with fever and slight jaundice. He had not lost any in weight up to that time. In 12 days the jaundice was extreme and his condition gradually became worse.

On February 28 a tumor mass could be felt in two places, (1) over the gall-bladder, but rather indefinite, and (2) over the head of the pancreas, and rather distinct. Deep percussion over the mass in the gall-bladder region indistinctly outlined the shape of the tumor, but the gall-bladder itself could not be felt. There was enlargement of the liver, and it extended upward rather than downward, above the right nipple. Tympany was general. As soon as the abdomen was opened there were encountered in the region of the gall-bladder extensive adhesions of the omentum which was gathered together like a ball. It was adherent to the large bowel, stomach, liver and anterior abdominal wall. This was the indistinct tumor that had been previously felt in the region of the gall-bladder. It was opened and about one pint of a clear fluid was evacuated. The liver was drained by a tube passed into the hepatic duct, and the abdomen was closed in the usual manner. The patient was transfused and put back to bed. He died the fifth day after the operation. The postmortem disclosed a carcinoma of the head of the pancreas, with extreme dilatation of the ducts and absence of the gall-bladder.

65. **Raffia Ribbons as Drainage Material.**—Raffia is a vegetable fiber obtained from a variety of palm trees indigenous to Madagascar Island. In this country the material is employed in basketry and florists use it as cordage. It is obtained in large twisted skeins, each skein containing a great many ribbons of from 3 to 4 lengths. When dry it is a pliable cord easily split in a lengthwise direction, but possessed of unusual strength and does not break. When wet, raffia is as soft as wet paper and tends to spread out in ribbons of from one-half to one inch in width. It does not deteriorate at the temperature of boiling water, nor is it injuriously affected by watery or antiseptic solutions. Capillarity is one of its qualities and the strands rapidly absorb water. Its capillarity is not, however, so marked as that of gauze, and when this feature is of importance, all things being equal, the gauze should take preference. The material may be boiled at the same time with the instruments, or it may be preserved ready for use, in an antiseptic solution. Drains which have not been used are not wasted and may be resterilized. So far as Newman's observations go raffia possesses no objectionable features. The ribbons are perfectly bland and remain in the tissues unaffected by the secretions. There is no danger of a decubitus from contact and healthy granulations grow around and not into the fibre. The inexpensiveness of the material is of practical importance.

66. **Tumors of the Pituitary Body.**—In Kanavel's infranasal method of approaching the pituitary, the turbinates and the ethmoid cells were untouched and except for the subsequent local infection engendered by the nasal pack and the hemorrhage encountered while the tumor was being removed, the operation presented no difficulties. A postoperative considera-

tion of these dangers leads Kanavel to suggest that the safest procedure in these cases would be a two-step operation. The first stage should comprise the removal of the bony septum and the anterior wall of the sphenoid cells. The middle turbinates may also be removed if they seem to obscure the field. This can all be done without any skin incision. After the field has entirely healed, the second stage dealing with the sella turcica and the tumor can be carried out.

67. **Nail Extension in Fractures.**—By this method the weight is attached directly to the distal fragment by means of a nail which is driven through the bone; the nails are either angular or flat and 4.20 cm. long. A nail may be driven into the bone on either side; or one nail may be driven entirely through the bone and soft parts, or the bone may be drilled through, the drill being allowed to remain, and the extension being applied to the ends of the drill as they project from either side. One nail or drill is better than two smaller nails, for the reason that the smaller ones become loose from absorption of bone. The drill is passed through the spongy portion near the epiphyseal line, the nearer the compact bone the better, as less pressure atrophy results than when the drill is entirely within the spongy portion. In fractures of the femur the drill is passed one handbreadth above the line of the joint, in fractures of the leg below the knee, either through the tibia or os calcis.

The method *a priori* seems productive of much pain to the patient. As a matter of fact this is not so. Not one of Anschütz's patients has complained more than the patient who has the ordinary adhesive plaster extension applied. Children also complain little of the treatment. The pain produced is in no way a contraindication to its employment. The greatest consideration is in regard to the danger of infection. In the light of modern views on asepsis and infection some anxiety may be caused by driving a nail through the skin into the bone or entirely through the limb and allowing it to remain for weeks. Anschütz does not employ nail extension in fresh uncomplicated fractures, especially when the nail must necessarily come near the hematoma. The direct results of the traumatism are allowed to subside before the nail extension is applied and cases are still amenable to the treatment weeks after the injury. Since there is a danger from infection, Anschütz will not at this time recommend that the nail extension should be generally used without strict indications for it. Further, on account of lack of sufficient experience he cannot say whether the joint function may or may not be interfered with by the nail's proximity to it.

Journal South Carolina Medical Association, Florence

March

68 Preventive Tendencies and Measures in Medicine. F. Moore, Aiken.
69 Pellagra—Report of Six Cases. G. A. Neuffer, Abbeville.
70 Pellagra. C. M. Walker, Westminster, S. C
71 The Spirit and Philosophy of Medical Ethics. L. B. Bates, St. Matthews.
72 Uncinariasis. W. Weston, Columbia.

The New Mexico Medical Journal, East Las Vegas

March

73 The Etiology, Pathogenesis and Treatment of Vesical Calculus. J. W. Colbert, Albuquerque.
74 Two Cases of Hodgkins Disease. B. F. Stevens, El Paso, Texas.
75 Use and Abuse of Tuberculin. R. Smart, Albuquerque.
76 Use and Abuse of Surgery. W. C. Buchly, Roswell.

Chicago Medical Recorder

April

77 *Proptosis of the Left Broad Ligament as a Cause of Chronic Constipation Associated with Abdominal Pain in Women. W. E. Miles, London, Eng.
78 Peroral Intubation. F. Kuhn, Kassel, Germany.
79 Traumatic Neuroses from a Medical Point of View. A. Church, Chicago.

77. **Proptosis of the Left Broad Ligament a Cause of Chronic Constipation.**—The possibility of there being some exciting cause of persistent constipation in women, associated with pain in the right iliac fossa, by the circumstance that such symptoms were often erroneously attributed to appendicitis, and by the fact that he had so often seen apparently healthy appendices removed without benefit to the patient, determined Miles to treat such patients by opening the abdomen by a median sub-umbilical incision in search for a possible cause. By so doing, he came to notice that in all patients thus operated on, the inlet to the pelvic cavity was considerably obstructed by the left broad ligament having assumed a horizontal instead of a vertical position and thus forming a distinct shelf. He further observed that the proximal portion of the pelvic colon rested on this shelf, and that the remainder of that portion of the bowel, in order to pass downward into the cavity of the pelvis, was thus obliged to cross over the tense free border of the ligament with the result that a definite kink in the lumen was made. Such a condition of affairs seemed to account for the obstruction to the fecal movement in the colon. Moreover, in all these cases definite adhesions were found to exist between the broad ligament or the uterine adnexa and the pelvic colon and were contributory to peristaltic impediment. These observations convinced Miles that obliteration of the left broad ligament was the only means by which the obstruction to the pelvic inlet could be remedied, and accordingly he devised the operation by which it could be done. This operation consists of removing a wedge-shaped piece out of the ligament, the base of the wedge being situated at the free border of the ligament. The chief symptoms indicative of the obstructive effect of a proptosed left broad ligament on the passage of feces along the pelvic colon are (a) constipation; (b) left iliac pain; (c) right iliac pain; (d) flatulent distention of the abdomen; (e) gastric disturbances; (f) the passage of mucus by rectum; (g) pain in the lumbosacral region; and (h) a state of chronic invalidism. Miles has operated on 150 patients with highly satisfactory results. With two exceptions they have all been relieved of the symptoms.

Interstate Medical Journal, St. Louis

April

80 Vaginofixation of the Uterus for the Cure of Cystocele. S. W. Bandler, New York.
81 Pregnancy in its Relation to Disease. H. Ehrenfest, St. Louis.
82 The Causation of Otosclerosis. M. Yearsley, London, Eng.
83 Uncinariasis. W. Weston, Columbia, S. C.
84 Renal Calculus and Remarks of Oxaluria. G. Baumgarten, St. Louis.

Journal of Cutaneous Diseases, New York

April

85 Elastic Tissue of the Skin. C. J. White, Boston.
86 Erythroderma Squamosum (Parapsoriasis). A. Ravogli, Cincinnati.
87 The Rare Dermatoses. W. B. Trimble, New York.
88 Keratosis Palmaris et Plantaris with Alopecia. J. Dunn, U.S.P.H. and M.-H.S.

Annals of Surgery, Philadelphia

April

89 Stovain Spinal Anesthesia. L. Noland, Canal Zone, Panama.
90 *Terminal Arterial Anesthesia. J. L. Ransohoff, Cincinnati.
91 *Anesthesia by Colonic Absorption of Ether. W. S. Sutton, Kansas City.
92 *Pus in the Abdominal Cavity. J. B. Deaver, Philadelphia.
93 *Treatment of Diffuse Progressive Free Peritonitis. A. G. Gerster, New York.
94 Bone Plastic Operation for Skull Defects. E. R. Rost, Rangoon, Burma, India.
95 Ping-Pong-Ball Indentation of the Skull without Fracture. W. H. Luckett, New York.
96 *Tuberculosis of the Lip. G. E. Armstrong, Montreal.
97 Suture of the Recurrent Laryngeal Nerve. J. S. Horsley, Richmond, Va.
98 *Unilateral Laminectomy. A. S. Taylor, New York.
99 Deformities of the Renal Pelvis. W. F. Braasch, Rochester. Minn.
100 *Angioma of Papillæ of the Kidney. G. MacGowan, Los Angeles.
101 Combined Cystoscopic and Roentgenographic Examination of the Kidneys and Ureter. A. A. Uhle, G. F. Pfahler, W. H. MacKinney and A. G. Miller, Philadelphia.
102 Treatment of Syphilis by Hypodermic Injections of Salicylate of Mercury. M. Brooks, Philadelphia.
103 Plastic Operation for Relief of an Incurvation of the Penis. O. Horwitz, Philadelphia.
104 The Principle of the Teale Flap Applied to Amputation of the Penis. W. M. Mastin, Mobile, Ala.

90. **Terminal Arterial Anesthesia.**—The anesthesia employed by Ransohoff is induced by the injection of cocain solution directly into the artery supplying the area to be anesthetized. It is applicable only to a certain group of cases in limited areas of the body. The nature of the anesthesia is terminal —that is, the cocain is carried by the capillaries to the individual nerve endings. The solution is diffused through the capillary walls into the surrounding tissues, and very little, if any, is returned through the veins to the general circulation. The following technic is recommended for use in

man: The main artery supplying the part to be anesthetized is exposed under infiltration anesthesia. An Esmarch bandage is bound about the limb some distance above the point of proposed injection into the artery. The tourniquet should be used as in the Bier hyperemic treatment; that is, snug enough to constrict the veins, but not so tight as to interfere with the arterial circulation. From 4 to 8 c.c. of 0.5 per cent. cocain in normal salt solution should be injected into the artery in the direction of the blood stream. The needle should be as fine as possible. After anesthesia is complete, the Esmarch bandage is removed and the wound closed. The maximum dose suggested, that is, 8 c.c. of 0.5 per cent. cocain solution—contains only 0.04 of cocain, a safe dose.

This method of anesthesia is said by Ransohoff to be an ideal one for certain areas of the body where general anesthesia is contraindicated. It is particularly applicable to the upper extremity, where the brachial, radial or ulnar artery may be exposed with little difficulty. For the larger operation on the lower extremity, when general anesthesia is contraindicated, spinal anesthesia seems more desirable, but for the operations about the foot and ankle this method of anesthesia has, he asserts, a distinct place. The greatest advantage of this procedure is its safety, which depends, Ransohoff states, on the small quantity of dilute cocain solution used and its probable diffusion into the tissues.

91. **Anesthesia by Colonic Absorption.**—The colonic method of administration of ether is more complex than the pulmonary method in general and requires from the anesthetist a broader appreciation of the physiologic factors involved. For these reasons alone its field of usefulness is limited to cases in which it presents distinct advantage over the pulmonary method. It is therefore not a method adapted to the experimental use of the tyro but rather a valuable addition to the armamentarium of the trained anesthetist. The indications for its use according to Sutton are as follows: Operations on or about the respiratory tract (head, neck and chest) especially such as lay open the mouth, larynx, pharynx and trachea; when ether absorption must be minimized on account of lung, heart or kidney lesions; respiratory embarrassment. The contraindications are lesions of the alimentary tract, especially such as might cause weakness of the wall of the colon; laparotomies in general, except such as do not open the general peritoneal cavity, *e. g.*, suprapubic cystostomy; markedly incompetent sphincter or with large complete fistula-in-ano; orthopnea; emergency cases in general because of the lack of preparation of the colon. Sutton describes an apparatus which he has devised.

92. **Pus in Abdominal Cavity.**—Deaver has observed in certain desperate cases with large amounts of vicious pus in the cavity that a long incision partially approximated and overlaid with gauze to retain the intestines permits a marked escape of exudate and seems to relieve abdominal tension in a far more satisfactory way than a single tube or multiple tubes brought out through an angle of the incision.

93. **Progressive Free Peritonitis.**—Gerster makes an analytic review of 609 cases but space forbids making an abstract which would do justice to the paper. Speaking of treatment, he says that all measures are dominated by these requirements: Early and rapid operation; stopping of leakage; peritoneal drainage aided by posture; maintenance of the patient's strength by enteroclysis; withholding of food and drink while vomiting persists; and finally the discreet administration of opiates. The average mortality in 461 cases of free progressive peritonitis of appendicular origin treated from 1899 to 1908 was 31 per cent.—the percentage diminishing steadily from 79 in 1899 to 14 in 1908. The mortality among 148 cases due to injuries and affections of other viscera was 100 per cent. in tumors; 76.5 per cent. in intestinal perforations; 87.5 per cent. in complicated hernias; 66.6 per cent. in disease of female genitalia; 73.9 per cent. in typhoid perforations; 46.1 per cent. in gastric and duodenal ulcers; 66.6 per cent. in perforation of liver abscess; 100 per cent. in thrombosis of mesenteric vessels.

96. **Tuberculosis of Lip.**—Armstrong says that tuberculosis should be suspected when an ulcer on the lip or tongue presents a soft base with but little evidence of induration or infiltration, and especially when there are evidences of tuberculosis elsewhere. A diagnosis cannot be definitely arrived at without a microscopic examination. It may be sufficient to examine scrapings from the surface. He reports one case.

98. **Unilateral Laminectomy.**—The advantages of unilateral laminectomy are said to be: Minimum loss of blood and of bone; and therefore minimum loss of bony protection to the cord; no postoperative deformity of the back or loss of flexibility of the spine; exposure sufficient for all exploratory work, except in certain cases of fracture of the spine; for all nerve root work on one or both sides, for the removal of many tumors, and for minimizing the operative trauma in others by first exposing their exact size and location; exposure such as to diminish the chance of overlooking an anterior tumor.

100. **Angioma of Papillæ.**—MacGowan reports three cases of persistent hematuria which were relieved by a conservative operation and in each case the kidney was saved.

Memphis Medical Monthly

March

105 The Leucocytes in Appendicitis. B. N. Dunavant, Memphis.
106 The Relation of Adenoids to Facial Deformities. J. W. Price, Memphis.
107 Important Facts to be Considered in the Diagnosis of Diseases of Children. H. Hawkins, Jackson, Tenn.
108 Some Uses and Abuses of Quinin in the Malarial Districts. J. W. Armstead, Sidon, Miss.
109 Infantile Scurvy. A. G. Jacobs, Memphis.

California State Journal of Medicine, San Francisco

April

110 *A New [illegible] H. E. Alderson, San Francisco.
111 Congenit[illegible] Muscles of the Face and Eyes: "*Infan*[illegible] of Moebius. M. B. Lennon, San Francisco.
112 One Hundred Radical Mastoid Operations. C. F. Welty, San Francisco.
113 History of a Lawsuit for Alleged Malpractice. H. J. Kreutzmann, San Francisco.
114 Tuberculosis and the Modes of Infection. C. C. Walker, Washington, D. C.
115 Study of Speech Disturbances. H. Horn, San Francisco.
116 Labyrinthitis G. Selfridge, San Francisco.
117 Relation of Law to Medicine. J. G. Covert, Kings County.
118 Mastoiditis with Sinus Thrombosis. E. C. Sewell, San Francisco.

110. **New Vocation Dermatitis.**—Recent improvements in the process of manufacture of blasting caps, involving the use of the dry fulminate of mercury, have been so successful that the method will be more generally used. In view of the fact that several of the men working with this substance have developed severe dermatitis, Alderson describes the clinical history of the affection as shown in one instance. The patient is in excellent health and had always been so. Several years ago he had dermatitis venenata due to poison oak, from which he made a rapid recovery. He presented an acute erythemato-papular eruption of the face, neck, postaural region and the entire surface of both forearms (the hands, having rather tough, thick skin, are spared). The eyelids were very acutely inflamed and there was a violent conjunctivitis. Wherever the skin was thin and delicate the eruption was most severe. On the bearded portion of the face there was pustular folliculitis. On the forearm the eruption was papulo-pustular. The attack had lasted two weeks before the patient called for treatment. Alderson says that this dermatitis usually appears in men doing this work a very short while after exposure to the chemical, and it rapidly increases in severity. New papules may appear daily for some time after the onset of the inflammation. When warm and perspiring the skin seems to be particularly susceptible to the irritating effects of the chemical.

The following combination was found to be most efficacious:

℞.	gm. or c.c.	
Sodii carbonatis	30	ʒii
Aquæ destillatæ, q. s. sat. sol...........		
Lanolini anhydrosi, q. s. ad.............	60	℥i

M. Sig.: Smear thoroughly over exposed parts before going in fulminate rooms.

St. Paul Medical Journal

April

119 Standardizing Antituberculosis Work. C. Easton, St. Paul.
120 The Tuberculosis Problem. E. L. Tuoghy, Duluth, Minn.
121 The Antituberculosis Association and the Municipality in the Control of Tuberculosis. B. Rosing, St. Paul.

122 Caring for the Consumptive in his Home. F. Lee, Duluth.
123 The State Federation of Women's Clubs *vs.* the White Plague. C. G. Higbee, St. Paul.
124 Methods and Results in Arousing the Small Town by the Traveling Tuberculosis Exhibit. A. R. Blackey, St. Paul.
125 Surgical Treatment of Antral Disease. A. Schwyzer, St. Paul.
126 Eduard Brissaud. A. Souques, Paris, France.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

April 9

1 *Surgery of the Lymphatic Syste[illegible]
2 *Recurring Jaundice in Four [illegible] with Fatal Jaundice in Three S[illegible] [illegible]). Rolleston.
3 *Pigmentation of the Buccal Mucosa in Pernicious Anemia. T. G. Moorhead.
4 Epilepsy. W. A. Turner.

1. **Surgery of the Lymphatic System.**—The surgery of the lymphatic vessels and spaces, especially the surgery of dropsy, is discussed by Handley under three heads: (a) the surgery of lymphatic edema; (b) the surgery of serous effusions; (c) cancer surgery as a branch of the ablational side of lymphatic surgery. Instead of resorting to amputation in cases of brawny or dropsical arm of breast cancer, Handley performs lymphangioplasty. He buries a number of silk threads in the subcutaneous tissues of the arm, affording for the tissue fluid a permanent conduit, sufficiently unabsorbable, and not liable to obstruction by organization or thrombosis. In favorable cases it has the following effects: (a) There is complete relief from pain within 24 hours, unless the pain is partially due to some cause—such as nerve pressure—independent of the edema. (b) There is a marked and rapid fall in the tissue tension of the whole area drained by the threads. The arm in consequence, instead of being hard and brawny, becomes abnormally soft and flabby. This may sometimes occur even though postural treatment is neglected, and in the absence of any marked diminution of the diameters of the arm. (c) There is rapid subsidence of the swelling, commencing immediately in the hand, and extending to the forearm within 24 hours. At first the upper arm is unaffected, or its diameters may even slightly increase. But within a week or two the diameters of the upper arm are also markedly lessened. The subsidence is usually permanent, unless and until pleural effusion supervenes to interfere with drainage. These defects are at first dependent on the adoption of proper postural after-treatment, but after a few months elevation of the arm may be abandoned without any marked increase of swelling. (d) There is return of power to the paralyzed arm if the paralysis is of recent date. If the paralysis is of more than a few months' standing, no return of power is to be expected. (e) There is an improvement in the general condition, dependent partly on relief from pain and its associated symptoms of insomnia and depression, and partly on the abandonment of sedatives.

2. **Jaundice in Pregnancy.**—A woman who had never had jaundice at any other time had jaundice in her four successive pregnancies, and her first three infants died of jaundice. In the fourth pregnancy the woman was treated with hexamethylenamin and sodium salicylate, and, though she became somewhat jaundiced about the sixth month, she gave birth to a healthy child. In the family reported here there is the remarkable and, so far as Rolleston knows unrecorded, association of the recurring jaundice of pregnancy in the mother with fatal jaundice in the offspring. The most reasonable method of treatment appears to be to treat the mother during the pregnancy with biliary and intestinal antiseptics, to regulate the diet, and to prevent constipation. The infant's jaundice should be treated on the same lines, and if there are urgent symptoms by subcutaneous transfusion of saline solution. In view of the probability that the infantile jaundice is due to maternal toxemia it is probably wise to prevent the mother suckling the infant.

3. **Pigmentation of Buccal Mucosa in Anemia.**—Moorhead adds one case to the four cases previously reported by others in which there was well-marked pigmentation of the mucous membrane of the mouth in pernicious anemia.

Lancet, London

April 9

5 Angina Pectoris. W. Osler.
6 *Surgery of the Lymphatic System. W. S. Handley.
7 *Localization of Cerebral Function, Based on the Clinicopathologic Study of Mental Disease. J. S. Bolton.
8 *Modern Treatment of Pulmonary Tuberculosis. F. J. Wethered.
9 *Effects of a Serum on Carcinoma Occurring in Mice. C. Walker.
10 *Experimental Diminution of Resistance to Mouse Cancer. A. Leitch.
11 A Relic of the Jameson Raid. H. Curtis.
12 *The Use of Adrenalin Chlorid in Treatment of Plague. E. N. Thornton.
13 Barany's New Tuning-Fork Tests. E. C. Baber.
14 *Arthritis Deformans. R. L. Jones.
15 Life Assurance of Women. R. H. Fox.

6. See Abstract No. 1.

7. **Localization of Cerebral Function.**—As a summary of the results of his micrometric studies, Bolton says that the human cerebral cortex originally evolved from three primary cell laminæ, an inner or polymorphic, which is concerned with the performance of organic and non-voluntary activities; a middle or granule, which is receptive in function; and an outer or pyramidal, which serves as the physical basis of the associative functions of the cerebrum. The last of these is the distinctive feature of the cortex peculiar to the mammalia or the neopallium. These three laminæ appear during normal development in the order named, from within outward. The cortex of the visuo-sensory area is evolved before that of the visuo-psychic zone, and this before that of the prefrontal region.

In cases of mental disease grading from idiots and imbeciles through various types of non-demented and partially demented lunatics to the gross dement, marked differences in the degree of evolution and dissolution of the cortex exist, which, considered from the general aspect, follow the order of normal development. In amentia the condition is one of subevolution to different degrees; and in dementia the laminæ suffer in the reverse order to that of their evolution, the most affected being the latest developed, and the least affected being the earliest developed. The degree and type of these differences vary according to the region of the cortex, whether this be a projection area, a zone of special association, or the prefrontal region. In the case of the visuo-sensory area the prominent features are poor evolution of the pyramidal and polymorphic laminæ, and specialization of the granule or receptive lamina. There also exist individual variations in the degree of evolution of the granule or receptive lamina, and in that of the pyramidal or associative lamina, which individual variations bear no relationship to the degrees of amentia or dementia which exist in individual cases. In the case of the visuo-psychic zone, the important feature, apart from an especially good evolution of the granule or receptive laminæ, is a marked degree of individual variation with regard to the depth of the pyramidal or associative lamina. This individual variation, Bolton states, is not only independent of the existing grade of amentia or dementia, but also of the individual variation in this lamina which occurs in the visuo-sensory area.

In the case of the prefrontal region, both specialization and individual variation are practically or entirely absent, and the cortex merely exhibits degrees of subevolution or dissolution which vary according to the grade of amentia or dementia which exists in the individual cases. That the condition is one of true subevolution is shown by the fact that the laminæ are subevolved in the order of their normal development, the last to appear being the least developed and the first the most developed. The reverse order holds with regard to dissolution, the last lamina to appear during normal development being the first to undergo retrogression in dementia, and the first the last to retrogress. In the case of the cortex of the prefrontal region, therefore, the associative function of the pyramidal lamina may be regarded as "voluntary associative," in view of the fact that the essential feature of amentia and dementia is decrease, instability or loss of voluntary control over the process or cerebral association.

8. **Modern Treatment of Pulmonary Tuberculosis.**—Wethered contends that the modern treatment of pulmonary tubercu-

losis rests on the establishment of immunity. In order to procure this it is, in the first place, necessary *to prevent* excessive autoinoculation. The method most likely to effect this result is rest. Hence the benefit that accrues by the routine treatment hitherto adopted at special hospitals and sanatoriums—rest in bed until the temperature is normal. Subsequently the production of autoinoculation by suitable exercise renders the patient immune to increasing doses of self-manufactured tuberculin. If this is not possible, then immunity may be induced by hetero-inoculation.

9. **Effects of Serum on Carcinoma in Mice.**—Walker believes that what happens on the treatment of a mouse suffering from cancer with the testicle serum is rather the stimulation of the leucocytes to multiply and replace the cells of the tumor than a direct destructive influence on the part of the serum on the cancer cells themselves.

10. **Resistance to Mouse Cancer.**—From Leitch's experiments it is evident that the injection of cancer cells which are physically disintegrated without probably being chemically altered markedly affects the resistance toward living tumor cells. So far from conferring anything in the nature of immunity it has undoubtedly exalted the susceptibility.

12. **Adrenalin Chlorid in Plague.**—In the course of an outbreak of plague at East London, March, 1905, Thornton gave adrenalin chlorid a trial. On the administration of the drug in the first few cases in which it was tried, the results were sufficiently satisfactory to ensure that all future patients admitted during the outbreak should be treated in the same manner. For adults 31 minim doses of adrenalin chlorid of a strength of 1 in 1,000 were at first usually given by the mouth, with 10 minims of tincture of *strophanthus* every 4 hours for the first 3 days and 3 times a day thereafter for approximately another 14 days. Later, especially if the patient was extremely ill on admission, it was usual for the adrenalin to be given hypodermically or intravenously, in somewhat similar doses until the patient was out of danger, when it was given, as in the earlier cases, by the mouth. The mixture for oral administration was made up as required, for it does not keep. In the worst bubonic cases it was usual to commence the treatment by injecting 20 minims of the adrenalin chlorid solution in the neighborhood of the buboes, especially when the buboes were unusually painful or when much extravasation was occurring in the surrounding tissues. The axillary cases particularly (in which there are usually extensive serous effusion and hemorrhagic extravasation involving the axilla, arms and ribs) appeared to benefit from injections into the neighborhood of the bubo, and in these cases much of the usual extravasation was prevented. The hospital mortality from plague (excluding septicemic cases) in those patients not treated with adrenalin has been 37.4 per cent., or, excluding Asiatics, 35.9 per cent., as compared with a mortality of 26 per cent., only among those treated with adrenalin. This lower mortality does not appear to have been due to the fact that the patients treated with adrenalin had the disease in an unusually mild form, for, if anything, they appeared generally to have been somewhat worse than are patients who usually come under treatment, especially those toward the middle and end of the series.

14. **Arthritis Deformans.**—Jones discusses the classification and differential diagnosis of the various joint affections grouped generally under the term "arthritis deformans."

Clinical Journal, London

March 23

16 Clinical and Therapeutic Aspects of the Pituitary Body. H. C. Thomson
17 Extragenital Chancres. G. Pernet.

March 30

18 Etiology and Treatment of Tabes Dorsalis. D. Ferrier.

Bristol Medico-Chirurgical Journal

March

19 Radium and Some of its Physical and Therapeutic Properties. J. M. Davidson.
20 Diffuse Destructive Changes in the Liver Associated with Jaundice. C. Coombs.
21 Infection of the Urinary Tract with *Bacillus Coli.* J. R. Charles.
22 Hypnotism. H. P. Costobadie.
23 Oriental Medicine—Stray Jottings. V. B. Green-Armytage.

Presse Médicale, Paris

March 26, XVIII, No. 25, pp. 209-224

24 *Mongolian Spots. (La tache bleue congénitale mongolique.) E. Apert.
25 *Difficulty of Differentiating between Suppuration in the Lungs and Pulmonary Tuberculosis. R. Burnand.
26 *Gastric Digestion* of Starch with Hyperchlorhydria. (Digestion stomacale des féculents chez les hyperchlorhydriques.) L. Salignat.
27 The Streptococcus of Scarlet Fever and the Fixation of Complement Reaction. C. Foix and E. Mallein.

March 30, No. 26, pp. 225-232

28 Partial Baldness. (L'hémicanitie.) E. F. Dainville.
29 Agar Agar in Chronic Constipation. A. Martinet.
30 Technic for Determination of *Opsonic Index.* (*Pouvoir* opsonique.) L. Deval.

April 2, No. 27, pp. 233-248

31 Pain in the Heel. (La talalgie et les exostoses sous-calcanéennes.) P. Reclus.
32 Appliance for Ambulatory Treatment of Fractured Femur. (Appareil de marche pour fracture de cuisse.) Savariaud.
33 Ultimate Outcome with Fracture of the Leg. (Consolidation dans les fractures du membre inférieur.) L. Imbert.
34 Myasthenia Gravis
35 Mucomembranous [illegible] volution de la pathogénie et du traitement de [illegible] muco-membraneuse.) M. de Langenhagen.

24. **Mongolian Spots.**—Apert discusses the geographical distribution of this anomaly and its origin and significance. It usually disappears spontaneously before the age of 10.

25. **Differentiation of Suppuration in the Lung from Tuberculous Process.**—Burnand's patient was a man of 41 and all the signs indicated subacute pulmonary tuberculosis, but no benefit followed the usual fresh air and rest course. Puncture of the pleura gave issue twice to a serous effusion and the cytologic findings seemed to confirm the tuberculous nature of the process, as also the temperature curve, which was of the tuberculous type with nothing to suggest latent suppuration until the puncture needle happened to hit the pus pocket, the discovery of blood-stained pus clearing up the diagnosis. Operative treatment was delayed for six weeks but then confirmed the diagnosis. The patient, however, succumbed not long after to chronic septicemic intoxication. No tubercle bacilli were found at any time.

Semaine Médicale, Paris

April 6, XXX, No. 14, pp. 157-168

36 *The General Syndromes in the Pathology of the Blood. P. E Weil and A. Clerc.

36. **The General Syndromes in the Pathology of the Blood.**—Weil and Clerc remark that the term "blood disease" is a misnomer, as there is no actual disease of the blood but the blood merely varies according to the reaction of the blood-producing organs to various stimuli. Abstract speculation has given place now to practical conclusions, they state, and the blood syndrome is not only a guide for treatment but for prognosis also. They review and analyze the main types.

Berliner klinische Wochenschrift

March 21, XLVII, No. 12, pp. 517-564

37 Experimental Research on Nature of Drug Eruptions. (Wesen der Arzneiexantheme.) C. Bruck.
38 The Emphysema Question. L. Hofbauer.
39 *Practical Method of Obtaining the Duodenal Contents in Man. (Ueber Gewinnung von Duodenalinhalt beim Menschen.) M. Einhorn (New York).
40 Nascent Oxygen Baths in Treatment of Infectious Diseases. (Ueber Ozetbäder bei Infektionskrankheiten.) A. Wolff.
41 *Determination of the Coagulating Power of the Blood. (Neue Methode zur Bestimmung der Gerinnungsfähigkeit des Blutes.) W. Schultz.
42 Antitryptic Action of the Blood Serum. (Zur Frage der antitryptischen Wirkung des Blutserums.) P. Rondoni.
43 Influence of Diphtheria Toxin on the Suprarenals. (Einfluss des Diphtherietoxins auf die Nebennieren.) A. Strubell.
44 Urine Findings as Aid in Diagnosis of Cancer. (Verwertung des Harnbefundes zur Carcinomdiagnose.) E. Salkowski.
45 Modern Efforts in Surgery. (Moderne Bestrebungen in der Chirurgie.) A. Federmann.
46 Moving Pictures of Microscopic Findings. (Ueber mikrokinematographische Aufnahmen.) W. Scheffer.
47 Cystoscopy in Gynecology. E Runge.

March 28, No. 13, pp. 565-612

48 *Experimental Surgery of the Thoracic Aorta by the Method of Meltzer and Auer. (Experimentelle intrathorakale Chirurgie mittels der Methode von Meltzer und Auer.) A. Carrel (New York).
49 Method of Respiration by Intratracheal Insufflation: Its Scientific Principle and Its Practical Availability in Medicine and Surgery. (Methode der *intratrachealen Insufflation,* ihr wissenschaftliches Prinzip und ihre praktische Anwendbarkeit.) S. J. Meltzer (New York).
50 Circular Suture of Vessels. (Praktische Erfahrungen mit der zirkulären Gefässnaht, zugleich ein Beitrag zur Behandlung der angiosclerotischen Gangrän nach Wieting-Pascha.) V. Schmieden.

51 Transplantation of Kidneys. II. (Nierentransplantationen.) E. Unger.
52 Practical Importance of Determining Viscosity of the Blood in Acute Surgical Disease. (Praktische Wert der Viscositätsmessung des Blutes bei akuten chirurgischen Erkrankungen, insbes. bei der akuten Perityphlitis.) F. Oehlecker.
53 Artificially Induced Production of Urinary Concrements. (Ueber Erzeugung von Steinkrankheit bei Zuchttieren.) L. G. Michael.
54 *Intravenous [illegible] in Treatm[illegible] Veins in [illegible] Verf[illegible] Behandlung [illegible] der [illegible] Scharff.
55 [illegible] Treatment of Suppurative Processes. [illegible]dlung eitriger Prozesse.) M. Hirsch.
56 [illegible] Organs in Mice and Rats with Tumors. F. Medigreceanu.
57 Improved Technic for Gastroscopy. (Ein Gastroskop.) H. Elsner.

41. **Determination of the Coagulating Power of the Blood.**—Schultz uses a capillary tube bulging to form a dozen hollow beads, which are broken off in turn and the contents poured out into a certain quantity of physiologic salt solution. Only a few drops of blood are necessary for the test; the blood is protected from drying by the shape of the tube, while the process of coagulation is followed through every phase. Each tube will hold one or two drops. As the first bead is dropped into the salt solution, the blood escapes and not a trace of clot is visible, but clot particles are noticed more and more as one bead is broken off after another. In the findings described from a few cases, considerable difference was noted between the coagulating faculty of blood from the ear and that from a vein elsewhere. The bead capillary method seems to offer a number of advantages, Schultz thinks, while its simplicity permits its use at the bedside, in combination with a set of a dozen test tubes, each containing 1 c.c. of physiologic salt solution, into which the broken-off beads are dropped in turn.

39, 48 and 49.—Practically the same articles were published in the *Medical Record*, New York, Jan. 15 (No. 39) and Mar. 19 (Nos. 48 and 49), 1910.

54. **Local Mercurial Injections in Treatment of Varicose Veins.**—Scharff states that he has successfully applied this method of treatment in about 90 cases of varicose veins during the last 6 years. It is based on the current observation that intravenous injections are liable to induce local thrombosis, an untoward effect when the injection is made for other purposes but an ideal result when the aim is to render smaller the lumen of a varicose vein. The same injection has a different action according as the walls of the vein are sound or diseased, consequently a very small amount of the drug is needed to accomplish the desired result. He obtained the best results with a 3 or 5 per thousand solution of mercury bichlorid with a little salt, his formula being 23 parts sodium chlorid, 1 part mercury bichlorid and 3,000 parts distilled water. For the first injection he uses only 0.5 c.c of the fluid, injecting this amount at three different points as the patient stands on a table or sits with the knee flexed. The more pathologic the veins, the smaller the amount that should be used and the weaker the solution. The amount is gradually increased and the injections repeated at more points, the intervals ranging from 3 to 6 days. The patients should be instructed that the injection should be painless; if more than a slight smarting is experienced, the tip of the needle is outside the vein. He begins at the lowest varicose vein and works upward, but he warns that the closer to the bone, the greater the caution needed. Ulcers heal, he asserts, as the conditions in the circulation are improved. The only mishaps in his experience were in a case in which he sought to hasten matters by making larger injections, with the result that a small patch of gangrene developed; since then he has been more cautious, and in a case in which the patient did not complain although the injection was intensely painful, thus misleading the physician so that the fluid was not injected into the vein but into the surrounding tissue, with a resulting phlegmon. One patient was a corpulent woman of about 56 who could scarcely walk up a flight of stairs on account of the disturbances from varicose veins notwithstanding the constant wearing of elastic stockings. After six months of intermittent treatment she was able to walk for miles at a time without the slightest disturbance. The treatment aims to imitate Nature's methods of healing. All the patients were subjectively and most were objectively cured, he declares, and the cure has persisted to date.

Deutsche medizinische Wochenschrift, Berlin

March 31, XXXVI, No. 13, pp. 593-640

58 *[illegible]atment of Injuries of the Brain. (Diagnose [illegible] der Hirnverletzungen.) O. Tilmann.
59 *Pain in the Heel. (Zur klinischen Geschichte der Fersenneuralgie.) F. König.
60 Drainage of the Knee back of the Condyles with Purulent Arthritis. (Drainage des hinter den Condylen gelegenen Kniegelenksabschnittes bei Arthritis purulenta genu.) B. Riedel.
61 Experimental Production and Cause of Goiter. (Experimen[illegible]rsache des Kropfes.) [illegible] Wilms.
62 *[illegible] High Rectal [illegible] beim hoch[illegible]nom.) H. Küttner.
63 *[illegible]endix. (Die Karzinome das Wurm[illegible]) A. Dietrich.
64 *Causes and Effects of Rigid Thorax Indicating Chondrotomy. (Zur Klinik der pathologischen Statik und Mechanik des [illegible] Thoraxstarre]). R. von den Velden.
65 [illegible]ment of Fistulas. (Zur Fistelbehandlung [illegible] von Wismutpaste nach E. G. Beck.) Elbe.
66 Surgical Sterilization of the Skin with Alcohol and Iodin. (Ueber die Hautdesinfektion des Operationsfeldes mit Alcohol und Jod.) M. Donati.

58. **Injuries of the Brain.**—Tilmann reviews the various types of injury of the brain from different causes, emphasizing that injury may occur without inducing symptoms at first. In such cases he has found of great diagnostic value the projection of the lesion within on the scalp above as evidenced by hyperesthesia of the scalp at points corresponding to Head's zones; it may extend down on the neck and chest, and may fluctuate in intensity with the course of the lesion. This hyperesthesia may persist for years, and it may be accepted as a sign of an intracranial lesion if the area of tenderness retains its outlines on repeated examination. If the cerebrospinal fluid is blood-stained, the pulse is the index for primary operative measures; convulsions do not demand an operation unless they persist longer than twenty-four hours. He does not advocate trephining until the pulse and other signs indicate pressure on the brain or there are indications of infection. It is important in considering treatment to be able to distinguish between the signs of the injury itself and those of the secondary pressure on the brain. The latter include intense headache from the hemorrhage, restlessness, excitement, the patient tosses to and fro, groans and screams, until he loses consciousness, or there are attacks of vomiting, vertigo and coma. Choked disc is an important sign but it is hard to examine the restless patient. The pupils are contracted at first but gradually dilate. The pulse is rapid at first but then becomes slow, dropping to 40 or 50, and respiration is slow as in sleep. After an interval the pulse becomes much accelerated running up to 160 in some cases; the pulse thus warns of the danger of delay. The symptoms of concussion of the brain come on at once, with unconsciousness as the predominant symptom, while with contusion of the brain the local, motor and sensory symptoms are most prominent and epileptiform attacks occur, followed by improvement in the consciousness. The signs of compression develop later and continue a progressive course. With concussion the symptoms retrogress; with contusion they persist at about the same level. In conclusion he warns expressly against opiates and sedatives in case of injury of the brain.

59. **Pain in the Heel.**—König reports eight cases in which severe pains in the heel were cured by an operation. It revealed a bony outgrowth in some of the cases but in the majority the trouble was infection of the calcaneal bursa or of a supernumerary bursa. He thinks that this bursa formation is probably the unsuspected cause in many cases of so-called neuralgia of the heel. In four of his cases the bursitis alone was responsible for the pain in walking; in two cases there were concomitant bony outgrowths, evidently the result of the infectious bursitis. His experience has convinced him that "calcaneum spur" in itself does not cause pain; the pain develops when the spur is injured by some trauma or becomes involved in an infectious process originating in an adjoining bursa and frequently of gonorrheal origin; this was evident in two of his eight cases. In treatment the bone outgrowth and the bursa were both resected, the joint being entered from the external aspect.

62. **Sacral Displacement of the Rectum in Operating for High Rectal Cancer.**—Küttner extols the advantages of removing high cancer in the rectum in two operations. The results were

good in the ten cases which he reports in detail; in some of them the cancer seemed almost inoperable at first.

63. **Carcinoma in the Appendix.**—Dietrich has encountered five cases in the last year and a half; the patients were between 17 and 40 years old. The growth was a small epithelial tumor resembling the carcinoid tumors sometimes found in the small intestine.

64. See Berlin Letter, April 30, page 1456.

Medizinische Klinik, Berlin

March 27, VI, No. 13, pp. 493-530 and Supplement

67 Balneotherapy in Menstrual Disturbances. (Die Balneotherapie bei Menstruationsstörungen.) *S. Gottschalk.*
68 *Importance of Trauma for Development of Actinomycosis. (Bedeutung des Traumas für die Entwicklung aktinomykotischer Prozesse.) H. Noesske.
69 *The Karell Milk Cure i[illegible] [illegible]er Karell'schen Milchkur in der Entf[illegible] [illegible]. Strauss.
70 *Does Sex Influence the Prognosis in [illegible]? (Kann dem Geschlecht eine prognostische Rolle bei Diabetes mellitus zugemessen werden?) *S. Laache.*
71 Plastic Induration of the Penis. F. Callomon.
72 [illegible] Treatment of Gout. (Behandlung der Gicht mit [illegible].) *E. Diesing.*
73 Increased E[illegible]n of Polypeptids in the Urine in Cancer. (Vermehrte Ausscheidung von Polypeptiden im Harne Krebskranker.) F. Falk, H. Salomon and P. Saxl.
74 Anaphylaxis-Producing Action of Serums Containing Antibodies. (Ueber das Anaphylatoxin und die Anaphylaxie erzeugende Wirkung von antikörperhaltigen Seris.) E. Friedberger.
75 Pathology and Treatment of Pertussis. *F. Toeplitz.*

68. **Importance of Trauma for Development of Actinomycotic Lesions.**—Noesske has observed a number of cases in which latent actinomycosis was roused to active proliferation by some intercurrent trauma. He has also found similar instances in the literature. There may be an interval of years between the trauma and the manifest actinomycotic process; in one case 17 and in another 10 years had elapsed, and intervals of 5 and 10 years are by no means uncommon. In some cases an operation for old chronic appendicitis provided the trauma which caused the flaring up of a hitherto latent actinomycotic lesion in the abdomen, its gradually progressive course in striking contrast to that observed with postoperative peritonitis or with tuberculous lesions which are liable to develop at any point of lessened resistance. The actinomyces seems to possess the property of destroying the elastic tissue and this is responsible for the progressive propagation of the lesion by continuity simulating to a certain extent a malignant growth, although cases of actinomycotic pyemia are on record, developing from a simple superficial injury.

69. **Karell Cure in Obesity.**—Strauss has applied this method in about a dozen cases of obesity, with good results. He allows a glass of milk four or five times a day for three days as the only nourishment, and the patient is kept in bed. The patients lost from 5 to 10 pounds; and even a little more when the diet was kept up a few days longer, but the principal result was attained in the first three days. It is evidently due, he says, to the lack of salt in the diet and the small amount of fluid, and he thinks that far more attention should be paid to the salt and water metabolism in treatment of obesity than has been the case hitherto. This Karell diet, he adds, should be restricted to patients in whom the obesity does not yield to the ordinary measures. Its success shows that even when there is no evident dropsy there may yet be retention of fluids sufficient to explain part of the tendency to obesity, and this retention is corrected by the restriction to small amounts of a salt-poor fluid.

70. **Sex in Prognosis of Diabetes.**—Laache states that in his experience with 122 cases of diabetes only 22 per cent. of the 77 male patients died, while 40 of the 45 cases in women terminated fatally. This greater mortality among the women may be due, he remarks, to the fact that diabetes seems to affect preferably young women, and it is well known that the disease runs a more malignant course in comparatively young individuals.

Münchener medizinische Wochenschrift

March 22, LVII, No. 12, pp. 617-672

76 *[illegible] Organic Nervous Disease. H. Willige.
77 *[illegible] with Iodin Vapor. (Hautdesinfektion [illegible] mit Joddampf.) Jungengel.
78 [illegible]s. (Ueber Magenverdauung im [illegible]
79 [illegible] during Incubation of Measles. [illegible] im Inkubationsstadium der Masern.) G. Forssner.
80 Biochemistry of the [illegible] Deycke.
81 *Germ Content of N[illegible] [illegible]otte and S. Machida.
82 Celloidin Technic f[illegible] (Neue Methode der Herstellung von [illegible].) F. Maier.
83 Tumors in the Internal Iliac Fossa. K. Stern.
84 Change fro[illegible] to Two Legs as Factor in Certain [illegible] in Man. (Der Erwerb der aufrecht[illegible] [illegible]d seine Bedeutung für die Entstehung orthogenetischer Erkrankungen.) R. Klapp. Commenced in No. 11.

76. **Arsenic in Treatment of Organic Nervous Disease.**—Willige says that his experience has confirmed the assumption that minute, long continued doses of arsenic exert a stimulating action on nerve tissue. The benefit was marked in 8 out of 12 cases of multiple sclerosis in his experience. He describes them in detail, as also the cases in which the arsenic did not give such good results. The improvement was at first mostly subjective, the patients gaining in weight and feeling better generally, and this was soon followed by better functioning of the legs, some patients even being able to take long walks, when before they could not even stand without assistance. The best results were obtained in cases of uncomplicated multiple sclerosis in which the optic nerve was still intact. No benefit was ever observed when the optic nerve was already involved, and special care is necessary in such cases although arsenic does not seem to affect the optic nerve particularly, he remarks, except in the form of atoxyl. In 5 cases of polyneuritis, the long course of minute doses of arsenic was followed by marked improvement as also in 12 cases of neuritis or paralysis of various origins. On the other hand, no benefit was apparent from the arsenic treatment in a case each of spastic spinal paralysis, paralysis agitans, Friedreich's ataxia, pseudobulbar paralysis, lead poisoning and hemiplegia, although one young man with right hemiparesis of unknown cause, coming on suddenly, recovered completely under the arsenic as also a youth with relics of an encephalomyelitis. The arsenic was given in the form of arsenic trioxid, better known, perhaps, as arsenous acid, in a 1 per cent. solution, in subcutaneous injections, beginning with 1 mg. and increasing by this amount to 7 or occasionally to 10 mg. a day, continuing the maximal dose for from 3 to 8 days and then diminishing in the same way, repeating the course after suspension for 14 days. Most of the various preparations of arsenic on the market were tried but given up as inferior to the old and tried arsenous acid.

77. **Sterilization of the Skin with Iodin Steam.**—Jungengel states that the untoward effects sometimes observed with the tincture of iodin method of surgical sterilization are due to the medium in which it is dissolved or to its spoiling. He applies the iodin in the form of steam for which he has devised a convenient little apparatus as he describes in detail. The iodin by this method simultaneously sterilizes, induces active hyperemia and stimulates the tissues to rapid repair.

81. **Germ Content of Normal Organs.**—Bierotte and Machida found 10 varieties of germs in 59.25 per cent. of 54 organs taken from 11 apparently entirely healthy animals at the slaughter house.

Wiener klinische Wochenschrift, Vienna

March 31, XXIII, No. 13, pp. 459-494

85 [illegible] of Genital Glands on Exter[illegible] [illegible]uss der innersekretorischen [illegible] auf die äussere Erscheinung des Menschen.) [illegible]
86 Intracranial Removal of Hypophysis. M. Silbermark.
87 *Bacteriologic* Differentiation of Puerperal Streptococcus Infection. (Ueber die neueren Verfahren behufs bakteriologischer Differenzierung der puerperalen Streptomykose.) *H. Thaler.*
88 Metastasis in the Appendix with Mammary Carcinoma. R. Wagner.
89 Microscopic Research on Bullous Skin Diseases. (Ueber Zystokonien.) B. Lipschütz.

Zentralblatt für Chirurgie, Leipsic

April 2, XXXVII, No. 14, pp. 497-528

90 *Extension Treatment of Fractured Leg. (Zur Extensionsbehandlung der Unterschenkelfrakturen.) K. Knoke.

90. **Extension in Treatment of Fracture of the Leg.**—Knoke applies a plaster shoe in treatment of fracture of the lower third of the leg, to insure extension with better effect than the Bardenheuer method permits in this region. Heavier weights can be attached than with any other technic.

Zentralblatt für Gynäkologie, Leipsic

April 2, XXXIV, No. 14, pp. 465-496

91 Unfavorable Influence of Vaginal Lactic Acid Douches in Obstetric Cases. (Ueber Versuche mit Milchsäurespülungen während der Geburt und im Wochenbett.) O. Eisenreich.
92 *Excessive Transitory Hypertrichosis due to Pregnancy. C. F. Jellinghaus.

92. Practically the same article was published in the *Bulletin of the Lying-in Hospital City of New York*, March, 1909.

Zentralblatt für innere Medizin, Leipsic

April 2, XXXI, No. 14, pp. 345-368

93 Modified Technic for Wassermann Reaction. (Verwendung autolysierter Lebern zu Organextrakten für die Wassermann'sche Reaktion.) A. Stühmer.

Riforma Medica, Naples

March 21, XXVI, No. 12, pp. 309-336

94 *The Antimalaria Campaign. (La lotta contro la malaria.) G. Rummo.
95 Compression of the Spinal Cord by a [illegible] Mechanism and Behavior of the Refle[illegible] del midollo spinale da neoplasma vertebrale. Sulla conoscenza delle vie commissurali midollarie sulla fisio-patologia dei riflessi. Genesi dei reflessi superficiali.) G. Severino and R. Ciauri.
96 Infantile Splenic Anemia with Leishman Parasites. (Kala-azar?) R. Jemma. Concluded in No. 13.

March 28, No. 13, pp. 337-364

97 *Action on the Kidneys of Long-Continued Small Doses of Quinin. (Azione della chininizzazione lenta e protratta sullo stato anatomico e funzionale del rene.) L. Ferrannini.
98 *Quinin in Malaria. (La malaria si deve col chinino prevenire o curare?) A. Celli.

94. **The Campaign Against Malaria in Italy.**—Rummo states that there is considerable discussion in Italy now as to whether quinin should be taken systematically as a preventive in malarial districts, some advocating compulsory prophylaxis by this means. In order to determine whether long-continued preventive doses were injurious, extensive experimental and clinical research has been under way in his clinic, some of which has already been mentioned in The Journal. The results seem to show, he says, that small doses of quinin can be kept up for six months at a time without harm, especially when given by the intermittent method, that is, 1 gm. (15 grains) twice a week; this allows time for recuperation between the doses, and it is also more convenient. This quinin prophylaxis, he declares, should be systematically applied in every hotbed of malaria. He regards persons with latent malaria as the most dangerous for the community and insists on the importance of thorough, persistent treatment in every case until the patient is absolutely cured. He adds that man and the mosquito are not the only elements in malaria; undrained land is the fixed and potent factor which renders all other measures comparatively futile. Until the marshes are drained, he says, the campaign against malaria in Italy will never prove a complete success, and to this end efforts should be mainly directed.

97. **Action of Long-Continued Quinin Doses on the Kidneys.**—Ferrannini reports experimental and chemical research which has demonstrated that quinin in small doses, even continued over months, does not injure the kidneys seriously, but after several months the kidneys seem to yield more readily to external influences, responding more rapidly with albuminuria, etc., to factors which would not affect the sound kidney. Microscopic examination of the organs after several months revealed further certain lesions in the secreting portion of the kidneys. His practical conclusions are that long-continued, small doses of quinin may be regarded as harmless unless administered longer than several months.

98. **Quinin Prophylaxis of Malaria.**—Celli presents various arguments based on clinical and experimental data to sustain his assumption that epidemic malaria is the result of the infected human being plus the anopheles, plus three unknown quantities, x, y and z—x representing the predisposing or immunizing biologic factors, y the physical, and z the social factors. The great lack at present, he declares, is a means to diagnose latent malaria; the apparently healthy hematozoon-carriers are a frequent source of contagion. He remarks in regard to the discouraging inefficacy of quinin in chronic malaria, that every effort should be made to prevent the disease from getting into the refractory chronic stage. Prophylactic doses of 0.3 gm. (5 grains) of quinin every day will ward off malaria, he says, and at much less expense than it can be cured. He lays great stress on the importance of drainage and cultivation of the land in the malarial districts, and also on the varying severity of malarial infection at different times and in various places, compelling individualization of the dosage. In localities where the malaria is mild, treatment of each patient may suffice, with preventive administration of quinin in the families attacked, but if the epidemic is severe, the quinin prophylaxis should be made general and supplemented by mechanical measures—screening, etc., especially when non-immunes are staying for a short time in malarial regions.

Norsk Magazin for Lægevidenskaben, Christiania

March, LXXI, No. 3, pp. 209-320

99 Causes of Scorbutus. (Om aarsagerne til skjørbug. 1 Fortsatte undersøgelser om enkelte vegetabilske fødemidlers antiskorbutiske egenskaber.) A. Holst and T. Frølich. (II. Experimentelle undersøgelser over infantil skjørbug.) T. Frølich.

April, No. 4, pp. 321-448

100 *Conservative Treatment of Coxitis. (Den konservative [illegible]ing-Larsen.
101 Pr[illegible] (Forslag til ny lov om vakcina-[illegible]
102 Te[illegible] (Funktionel mavediagnostik.)
103 [illegible]ection of 10 Ribs in Chronic Tuberculous [illegible] P. Bull.

100. **Conservative Treatment of Coxitis.**—Sinding-Larsen concludes his discussion of this subject with the statement that coxitis presents itself in such a variety of forms that no one method of treatment is applicable to all cases. Immobilization during the entire course of the affection is the sovereign measure against pain and also against destructive processes. With this he has been able to retain the functional use of the joint in 10 per cent. of his cases. He does not agree with Lorenz in several points, as he describes in detail; he punctures at the first sign of an abscess and then injects iodoform-glycerin emulsion. An incision may be necessary but resection should be avoided. It is not necessary, he says, to confine the patients to bed.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

A Text-Book of Pathology. For Practitioners and Students. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Second Edition. Cloth. Price, $5 net. Pp. 856, with 437 illustrations. Philadelphia: W. B. Saunders Co., 1910.

The Diseases of Infancy and Childhood. Designed for the Use of Students and Practitioners of Medicine. By Henry Koplik, M.D., Attending Physician to the Mount Sinai Hospital. Third Edition. Cloth. Price, $5. Pp. 944, with 233 illustrations. Philadelphia: Lea & Febiger [1910].

Proceedings of the American Pharmaceutical Association at the Fifty-Seventh Annual Meeting. Held at Los Angeles, Cal., August, 1909. Also the Constitution, By-Laws and Roll of Members. Cloth. Pp. 1319. Baltimore: American Pharmaceutical Association, 1909.

A Practical Treatise on Fractures and Dislocations. By Lewis A. Stimson, M.D., Professor of Surgery in Cornell University Medical College, New York. Sixth Edition. Cloth. Price, $5. Pp. 876, with 426 illustrations. Philadelphia: Lea & Febiger, 1910.

Prescription Writing and Formulary. By John M. Swan, M.D., Associate Professor of Clinical Medicine in the Medico-Chirurgical College of Philadelphia. Flexible leather. Price, $1.25 net. Pp. 185. Philadelphia: W. B. Saunders Co., 1910.

Twenty-Eighth Annual Report of the State Department of Health of New York. For the Year Ending Dec. 31, 1907. Volume II, Report of the Sanitary Engineering Division. Cloth. Pp. 869, with illustrations. 1908.

Duodenal Ulcer. By B. G. A. Moynihan, M.S., Senior Assistant Surgeon at Leeds General Infirmary, Eng. Cloth. Price, $4 net. Pp. 367, with 63 illustrations. Philadelphia: W. B. Saunders Co., 1910.

Thirty-Fourth Annual Report of the Managers and Officers of the New Jersey State Hospital at Morris Plains. For the Year Ending Oct. 31, 1909. Paper. Pp. 49.

Fortieth Annual Report of the State Board of Health of Massachusetts. Public Document No. 34. Cloth. Pp. 876. Boston. 1908.

My Personal Experience with Tuberculosis. By Will M. Ross, Stevens Point, Wis. Paper. Price, 50 cents. Pp 61. 1910.

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Original Articles

ACUTE PERFORATIONS OF THE HOLLOW VISCERA*

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OMAHA

Probably no calamity which may befall calls for more promptness in treatment than the several perforative lesions which frequently involve the gastro-intestinal tract. Every man engaged in the practice of medicine should have clearly in mind the differential points in the diagnosis of these conditions as well as clear-cut ideas about treatment. Prompt diagnosis and prompt treatment are necessary if the life is to be saved.

Perforation from gastric and duodenal ulcers, perforations of the gall-bladder and of the appendix, and typhoid perforations are the type of all and will be the ones to be considered at this time.

SYMPTOMS OF GASTRIC PERFORATIONS

Acute perforations of round ulcers of the stomach are practically always accompanied by serious and well-marked symptoms. First, there is usually sudden sharp intense pain in the epigastric region, so sudden and so intense that it is not a rare occurrence for the patient to fall to the floor in a faint. This very intense pain is usually short in duration, but well-marked shock is present for a variable length of time, ranging from an hour to several hours. The ordinary manifestations of shock are found, a cold clammy skin, paleness of the face and lips, restlessness, a thready pulse and a subnormal temperature.

Within a few hours tenderness over the abdomen becomes general, perhaps slightly greater over the epigastrium, and abdominal rigidity is marked and boardlike. When the rigidity is first manifest the abdomen is usually flat, but it soon becomes distended and tympanitic and vomiting is likely to occur, the typical vomitus of peritonitis. The pulse has now become fuller and more rapid and as the peritonitis progresses it becomes still more rapid and more feeble.

The symptoms given by Mayo Robson are as follows:

> A sudden sharp abdominal pain. . . . Almost immediately the expression of the face changes to one of anxiety and great distress; the extremities become cold and clammy and the face blanched; the respirations are usually shallow and quick, and the pulse rapid and almost imperceptible at the wrist; vomiting may occur. . . . As a rule the patient rallies and the initial symptoms of shock pass off to a certain extent. There is then a great complaint of thirst which cannot be satisfied and the urine is scanty and high-colored.

The recti are rigid, the whole abdomen is board-like, at first retracted, later distended with gas. Liver dullness usually absent. In about 90 per cent. of the cases a history of previous stomach trouble can be elicited.

TREATMENT OF GASTRIC PERFORATION

Total abstinence from water should be prescribed, as water will only increase the peritoneal soiling. Cardiac stimulants should be used hypodermatically and if the shock is very severe all the usual methods to combat shock. Even on strong suspicion laparotomy should be performed since it has been shown that the earlier the operation after perforation the better the results. Mayo Robson and Moynihan have compiled a table of the mortality following operation in 133 cases.

Operated.	Mortality Per Cent.
Under twelve hours	28.5
From twelve to twenty-four hours	63.6
From twenty-four to thirty-six hours	87.5
From thirty-six to forty-eight hours	100.0
Over forty-eight hours	51.5

It is seen in this table that the mortality increases rapidly up to forty-eight hours when it becomes 100 per cent. Operations done later than this show less mortality, owing, no doubt, to the well-known fact that some of these cases have only a localized infection, becoming walled off and these occasional favorable cases are the ones in which the patient is most likely to be in a condition after two days to warrant an operation.

Sinclair Kirk, quoted by Robson, reports ideal results. He gives eleven cases in all of which the patient recovered. Eight of the patients were operated on within five hours, one seven, one ten and one twenty hours after perforation. It is now generally conceded by those with the best experience that the operation should be done with the greatest promptness possible compatible with good and thorough work regardless of the shock present at the time. Death is not as likely from shock as from peritonitis if operation waits on shock.

As regards technic, simple closure of the perforation by two or three superimposed purse-string sutures of linen thread is the best. The subject of drainage is important. If there is almost no peritoneal soiling it is sometimes advisable not to drain. As a rule pelvic drainage through a stab-wound above the pubes, by means of a rubber or glass tube, and with the patient in the exaggerated Fowler position is most likely to meet with good results. This should also be followed by the use of normal salt solution per rectum after the Murphy method, and ice over the abdomen, nutritive enemas and entire gastric abstinence for from three to seven days.

The question whether, after closure of a gastric perforation, it is advisable to perform gastro-enterostomy has been much in the foreground during the past few years. Often ulcers are multiple and secondary perforations may occur, as they have done in many instances. Robson, in Keen's "Surgery" gives the arguments in favor of gastro-enterostomy under such circumstances as follows:

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* Read before the Western Surgical and Gynecological Association, Omaha, Dec. 10, 1909.

1. Other ulcers will be cured by the operation.
2. If a second ulcer is on the point of perforation such perforation will probably be prevented, as tension of the stomach walls will be avoided.
3. After gastro-enterostomy more secure healing of the sutured ulcer is likely to occur, and there will be less likelihood of the stitches giving away.
4. It diminishes the risks of hematemesis occurring after operation.
5. It enables saline aperients to be given shortly after operation and so secures more efficient drainage of the peritoneal cavity.
6. It permits earlier feeding than would otherwise be the case.
7. If the ulcer is at the pylorus it prevents the danger of stenosis.

OTHER PERFORATIONS

In perforating ulcer of the duodenum we have the same acuteness of the onset, but the sharp primary pain is a little more to the right. If a history of previous gastric symptoms is obtainable, the pain is found to have come on two and one-half hours to four hours after eating instead of one to two hours as in gastric ulcer. The course of the case, the need for prompt operation and in general the technic of the operation and the indications for or against gastro-enterostomy are essentially the same as have been outlined for perforating ulcers of the stomach.

Perforations of the gall-bladder are fortunately rare. The sudden pouring out of the contents of a distended gall-bladder into the unprepared peritoneal cavity brings about intense shock which may prove immediately fatal. Usually the inflammatory trouble has already produced pericystic adhesions so that the general peritoneum is protected against acute perforations. When they occur the operation should usually include removal of the gall-bladder.

Acute perforations of the appendix vermiformis are exceedingly frequent, more so, I am convinced, than is generally supposed. Here too the general peritoneal cavity is usually protected by adhesions before the perforation occurs resulting in a localized abscess. The omentum here serves a most useful purpose, surrounding and becoming adherent to the inflamed appendix.

Unfortunately the infection of the external peritoneal covering of the appendix does not precede perforation, at least not soon enough to induce life-saving adhesions. In these cases there is immediate shock of greater or less degree and a rapidly following general peritonitis. Operation before time for the onset of peritonitis gives the best results. If not soon enough for this, the newer the peritonitis the better. In general it may be said that the mortality increases rapidly with the development and progress of the peritonitis.

Every case of typhoid fever is liable at any moment, especially during the latter part of the second and during the third week, to become a very urgent emergency surgical case by the occurrence of a perforation. It is doubtful if we have even yet fully realized the importance of perforations as a mortality factor in typhoid fever, or the number of lives that might be saved by prompt diagnosis of this calamity and timely operation. Osler several years ago stated it as his opinion that one-third of all the deaths in typhoid fever were due to perforations. When we consider that upward of 50,000 die annually of typhoid fever in the United States and that over 16,000 of these deaths may reasonbly be attributed to perforations, it gives the discussion of this subject a dignity which merits the best thought and best effort of all engaged in practice.

I am convinced that every one treating a case of typhoid should have constantly before him the liability of the occurrence of perforation and that he should be on the alert to recognize it when it occurs and to act promptly should the emergency arise. The nurse should be instructed that the occurrence of sudden and unusual pain in the abdomen, especially in the right lower quadrant, is a danger-signal and calls for immediate notification of the attending physician. She should also be instructed to note the pulse and temperature of the patient at half-hourly intervals after the occurrence of the acute pain. She should also be on the alert for other manifestations of shock as pinched features, cold extremities, clammy skin, the characteristic restlessness, etc., and the physician should be informed of the results of these observations as soon as possible that he may have all the aids to diagnosis at hand. Often the subnormal temperature and other shock symptoms are very transitory and by the time the physician can reach the house they are gone. By this time it is usual for the abdominal muscles, especially over the site of perforations, to become somewhat more rigid than normally, the rigidity increasing in intensity with the advent of peritonitis.

It may be stated that the severer the type of the fever and the worse the physical and mental condition of the patient at the time of the perforation the more difficult will the diagnosis be and the more probable will the occurrence be overlooked. Definite symptoms such as have been sketched, even though the diagnosis appears to be in some doubt, call for immediate abdominal exploration. In cases of doubt, if operation is delayed until positive diagnosis of developing peritonitis is made, the mortality is more than doubled. Thus far I have found perforation in every case in which I have operated and must confess to have lost some patients because of fear of opening an abdomen needlessly.

The mortality following perforations of typhoid ulcers without operation is said to be from 95 per cent. up to 99 per cent. by different observers. The mortality of cases operated promptly after the occurrence of perforations has been given by several at less than 50 per cent. It must be acknowledged that at the period these operations are usually done the mortality is very high, many reporting 75 to even 100 per cent. This mortality is not necessary if operation is done before peritonitis begins to develop, and I expect to live to see the time when prompt operation is the rule and the mortality not more than 10 to 20 per cent.

In all the operations for perforations the time element of the operation itself is of the utmost importance. "Quick in and quick out" should be the maxim. Labored and prolonged technic will kill more than it will save. The aim should be to stop the leak by simple suture and establish peritoneal drainage by a large tube through a stab-wound over the pubes and its end resting in the cul-de-sac of Douglas in cases in general. In rare instances it may be found that the leakage has been so slight and the soiling so localized that drainage may be dispensed with. It is also my opinion that we should be guided always by the time-worn maxim, "When in doubt drain."

CONCLUSIONS

The one or two important points it is desired to accentuate are the following:

1. In every acute abdominal pain, the possibility of perforation of some part of the alimentary canal should be considered, and the case should not be dismissed as trifling till perforation has been definitely excluded.

2. In every case of perforation there is an absolute indication for immediate operation.
3. If the symptoms point rather definitely to perforation, but the diagnosis is in some doubt, exploration is safer than delay.
4. Shock is no contraindication to operation.
5. The operation should be as expeditious as possible, only what is necessary being done and artistic ideals being left to less urgent cases.

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NOTES ON THE PRESENT STATUS OF NITROUS OXID IN SURGERY

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In response to a request by Dr. Mumford, the Chairman of the Committee on Anesthesia of the American Medical Association, Dr. Charles A. Powers of the committee has asked me to give late data on the use of nitrous oxid in surgery. In doing this it is impossible to omit reference to the excellent papers presented to the Section on Surgery at its session of 1908.

In 1868 Andrews, of Chicago, first used a combination of nitrous oxid and oxygen. It is interesting to note that the French were the first to consider nitrous oxid as an anesthetic for long operations. In 1880 Paul Bert published an article[1] on the use of nitrous oxid in protracted surgical operations. In the same year Boddaert published the report of the commission on a mixture of nitrous oxid and oxygen.[2] In the last ten years it has tended to become more prominent as an anesthetic in long operations. Bevan and Haggard have done much to promote its general use.

Muller,[3] in 1905, investigated nitrous oxid in a very thorough manner. He states that death occurs by apnea in man in from two to four minutes by straight inhalations of nitrous oxid. He asserts that the gas is absorbed through the lungs into the blood, and that it is transported to the central nervous system. The ganglion cells take up some substances from the blood and there is a physical change in the cholesterin-lecithin mixture, resulting in paralysis of the ganglion and central nerve cells. It affects the colored races more rapidly than the white, and women are more easily affected than men. In the higher latitudes it is less deadly than near the equator.

PATHOLOGY

During anesthesia there is a hyperemia of the internal organs and the work of the stomach, intestines and liver is hindered. Muller experimented on animals —dogs and guinea-pigs. He would anesthetize for about thirty minutes and wait twelve to twenty hours and repeat. This might be repeated once or twice more, so that every animal had from one to four narcoses. On examination he found drops of fat in the ganglion cells (this occurs after all anesthetics and soon disappears). Fat collections were found in the cells of the brain capillaries, extending to the larger vessels. These were found in the cells of the intima and media; between the cells masses of fat were found, which thicken the vessel walls. If they undergo involution through degeneration of the cells, however, a scar formation takes place, with rarefaction of the vessel wall, giving rise to aneurisms and brain hemorrhage. The heart was occasionally found dilated after long anesthesia and the heart muscle lost its transverse striation, the fibers were clouded and numerous fat droplets bipolar to the nucleus were found.

Kidneys.—The urine was found to contain albumin after narcosis. In the epithelium of the convoluted tubules fat was found in considerable quantities. There was fat metamorphosis also in the tubuli recti, but no fat was found in the glomeruli. There was marked hyperemia of the kidney vessels.

Liver.—Fat was observed in large and small droplets, mostly in the periphery of the acini; only slightly in the center; in the periphery there was degeneration and necrosis of the cells. There was marked hyperemia and some hemorrhage of the liver vessels and in the parenchyma.

Lungs.—Death occurs by apnea through paralysis of the respiratory center. In early narcosis there is stertorous breathing caused by the larynx. Muller thinks the cyanosis due more to a mechanical hindrance than to a lack of oxygen in the blood and over amount of carbon monoxid. Dilation of the pupils and swelling of the tongue occurred when the anesthesia was too deep. There was a stimulation of mucus and salivary secretions. Fat metamorphosis was observed in the epithelium cells of the bronchial tract, and fat droplets in the alveolar cells.

Holden believes that there is an increased tendency to bleeding in nitrous oxid anesthesia. He saw severe lung hyperemia, and he holds that all patients having any diseases of the lungs, or ill with a hemorrhagic diathesis, are unsuitable for nitrous oxid narcosis.

Hilliard,[4] in 1905, published an article entitled "Meteorological Conditions As Affecting Oxid Anesthesia." He stated:

> 1. When the barometer is high (30° or over) the induction of gas anesthesia is longer, there is less cyanosis and jactitation, the gas can be pushed to the abolition of the conjunctival reflex without undue cyanosis.
>
> 2. When the barometer is low it is useless to try to abolish the conjunctival reflex, because the patient becomes so deeply cyanosed and jactitates so excessively. With an increase in the time of induction anesthesia the duration of available anesthesia also increases, and with a pressure of 30 inches of mercury the anesthesia is quiet and lasts nearly as long again as when it falls below 29 inches. When one gives nitrous oxid during a fall in the barometric pressure cyanosis occurs early and in less than a minute jactitation will become a prominent feature while the pupils will only have begun to dilate; this, although the breathing is stertorous and the available anesthesia consequently short.

Bevan[5] has used nitrous oxid rather extensively in major operations. In his paper read at the fifty-eighth session of the American Medical Association in 1907, he discussed the use of this agent and gave a list of the operations in which he has employed it. In a recent communication he states that he is using it constantly in major operations. He says that it is contraindicated in lung conditions.

At the meeting of the surgical section of the American Medical Association last year, Hamburger and

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[1] De l'emploi du protoxide d'azote dans les operations chirurgicales de longue durée, Progrès méd., 1880.

[2] Rapport de la Commission chargée de l'examination du travail de M. Lebant conservant l'emploi comme agent anaesthétique d'un mélange de protoxide d'azote et d'oxygène sans pression, Bull. de l'Acad. Roy. de méd. de Belge, Brussels, 1880.

[3] Muller: Die Stickstoffoxydulnarkose. Berl. med. Wchnschr., vi, 178; Charter: Administration of Nitrous Oxid and Oxygen, Brit. Dent. Jour., xxvii, 443.

[4] Hilliard: Meteorological Conditions as Affecting Nitrous Oxid Anesthesia, Brit. Dent. Jour., xxvi, 598.

[5] Bevan, Arthur D.: Nitrous Oxid as an Anesthetic in Major Surgery, The Journal A. M. A., July 20, 1907, p. 197; Bevan and Favill: Acid Intoxication and Late Poisonous Effects of Anesthetics, The Journal A. M. A., Sept. 2, 1905, p. 691.

Ewing[6] reported their experiments on the effect of nitrous oxid on the blood. They examined the blood for hemoglobin before anesthesia, during anesthesia, immediately after consciousness returned, and twenty-four hours later. They found:

1. An increase of 13 per cent. of hemoglobin during anesthesia.
2. A fall of 6.5 per cent. immediately after the mask was removed.
3. The fall reduced to 1.6 per cent. twenty-four hours later.

They then experimented to find the relation of the erythrocytes to this change in hemoglobin. Their conclusions were the following:

1. There was little change in the relations of the red blood cells to the hemoglobin.
2. The fall in hemoglobin noted immediately after anesthesia was not followed closely by a corresponding fall in the erythrocyte count, but that there was a slight increase of erythrocytes which persisted.
3. There was a slight increase in the hemoglobin contents per cell and no demonstrable change in the number of red blood cells.

They concluded that this showed there was no oligocythemia due to hemolysis and no persisting oligochromia or anemia.

Summarizing the series, Hamburger and Ewing found:

1. The rise and fall of hemoglobin reading observed chemically holds true in experimented animals.
2. The return to normal occurs within two hours after anesthesia.
3. There is no accompanying rise and fall in erythrocytes.
4. This change does not correspond exactly to the hemoglobin change, as shown by the high blood decimal during anesthesia and the low quotient immediately afterward.
5. The percentage volume undergoes little or no change.
6. The specific gravity increases and decreases hand in hand with erythrocyte change.
7. There is a post-narcotic leucocytosis closely following the erythrocyte curve.

William D. Haggard,[7] in his excellent paper of last year, analyzes briefly the signs of nitrous oxid anesthesia as follows:

1. Quick, deep and stertorous respiration, slightly irregular.
2. Increased pulse rate.
3. Dilatation of the pupil.
4. Absence of eye reflexes.
5. Fixed eyeballs.

The symptoms due to asphyxia are:

1. Cyanosis in various degrees.
2. Jactitation.
3. Clonic movements of the extremities.

He states that when proportionately too much gas is given respiration is irregular, quick and stertorous; the eyeballs are turned upwards with the lids widely open and the pupil dilated. Cyanosis is then extreme, the pulse thready and rapid. Continuation of this, with exclusion of air, causes respiratory failure from muscular spasm, although the heart continues to beat.

Haggard classifies the advantages and disadvantages of nitrous oxid anesthesia as follows:

ADVANTAGES

1. Quickness of action.
2. Absence of uncomfortable sensations to the patient.
3. Almost immediate recovery.
4. Absence of lung complications.
5. Absence of danger to the kidneys.
6. Absence of post-anesthetic vomiting.
7. Improbability of subsequent degeneration of the kidneys, liver and heart.

DISADVANTAGES

1. It is not suitable for fat, plethoric and alcoholic patients.
2. Its zone of anesthesia is within narrow limits.
3. Lividity and occasional talking occur.
4. It needs an accomplished anesthetist; the apparatus is not always easy to obtain.
5. The cost is not always inconsiderable.

The contraindications for its use are:

1. It should not be used for patients with distended hearts or for those with extremely bad hearts, whether with valvular or myocardial disease.
2. It is not suitable for young children on account of their fear of the mask.
3. It should not be used in cases of narrow or abnormal air passages, enlarged lymph nodes, goiters, or enlarged tonsils and adenoids.
4. It is not useful in the lithotomy position, especially in cases of hemorrhoids, as the patients tend to straighten out their legs.

Buckler[8] uses the apparatus on the same principles as the Hewitt inhaler, with certain modifications suggested by Dr. Joseph Gwathmey.[9] He thinks that the sole objection to nitrous oxid and oxygen is that patients on regaining consciousness are more sensitive to pain than those who are partly dulled for hours as in ether anesthesia. This can usually be overcome by giving a quarter of a grain of morphin hypodermatically just before the gas is administered.

As a preliminary to ether Buckler believes that nitrous oxid has no equal; it prevents the coughing, holding of the breath, swallowing and later, the stage of preliminary excitement.

The contraindications for nitrous oxid anesthesia, according to Ream,[10] are atheromatous and arteriosclerotic conditions; although he thinks that with double diligence and oxygen these cases may be safely anesthetized. He found that sprouting seeds refused to grow when placed in nitrous oxid, but resumed their growth when pure oxygen was added. He is a firm believer in the use of nitrous oxid in obstetrical practice because one may obtain analgesia and even anesthesia without muscular relaxation or disturbance of the normal course of labor. Ream states that uterine contractions are not in the least interfered with when the agent is used in the following method:

On approach of labor pains the patient is permitted to inhale three or four breaths to place her in a state of analgesia; the inhaler is then removed and the process is repeated as often as is necessary. Should it be desired to retard labor a small percentage of chloroform may be added. Owing to the rapidity of the action of the gas and its rapid elimination it stands foremost as an obstetrical adjuvant.

Gwathmey uses the Hewitt inhaler as modified by himself. He gives morphin sulphate before operation and warms the gas. By experiments on animals he has demonstrated that nitrous oxid and oxygen are most valuable for weak, anemic men and the majority of women.

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[6] Hamburger and Ewing: The Blood Changes Incident to Surgical Anesthesia, The Journal A. M. A., Nov. 7, 1907, p. 1586.

[7] Haggard, W. D.: Nitrous Oxid Anesthesia, Report of the Anesthetic Committee, The Journal A. M. A., Nov. 7, 1908, p. 1576.

[8] Buckler, H. W.: The Use of Nitrous Oxid and Oxygen Alone, and in Combination with Ether as Anesthetics in General Surgery, Maryland Med. Jour., April, 1908.

[9] Gwathmey: Mixed Narcosis, The Journal A. M. A., March 28, 1908, p. 1022; Nitrous Oxid Gas and Oxygen as an Anesthetic Agent, with Notes on the Value of Warming the Vapors of Ether and Chloroform, read before the Academy of Medicine, New York, May 21, 1908.

[10] Ream: Nitrous Oxid and Oxygen in General Surgery, The Journal A. M. A, Sept. 12, 1908, p. 907.

A STUDY OF ACID-FAST AND ACID-SEMIFAST TUBERCLE BACILLI (HUMAN)

THEIR RELATION IN PURE CULTURES*

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In the examination of any sputum, observers have agreed that it is the greenish-yellow or caseous-looking masses that should be selected. When in such particles acid-fast bacilli can be demonstrated, after they have been spread, fixed and stained according to methods recommended in standard text-books, such bacilli are generally considered tubercle bacilli, and the sputum is said to come from a patient suffering from tuberculosis of the respiratory tract.

This, however, has been questioned by some observers, who assert that acid-fast bacilli demonstrable in the sputum are not always pathognomonic of tuberculosis of the respiratory tract. If so of what are they significant? Why the difficulty of demonstrating tubercle bacilli in the sputum of incipient, some moderately advanced, and very few advanced cases of clinical pulmonary tuberculosis?

Repeated careful examination of an average of twenty sputa daily for a period of about one year in the clinical laboratory of the Philadelphia Hospital, gave considerable difficulty in demonstrating tubercle bacilli in such cases.

In cases in which the clinical history was positive, the sputa were repeatedly examined by the spread method, and in many cases failed to demonstrate acid-fast bacilli. Such sputa were then treated with anti-formin, which destroyed all other bacteria. The sediment was then obtained by centrifugalizing, and repeatedly washed with sterile distilled water. The acid-fast bacilli, if present, were thereby obtained in greater concentration. Such sediments were spread on clean glass slides, dried and fixed by passing through the flame. New slides were always employed. These were kept in concentrated sulphuric acid, washed in distilled water, and kept in 95 per cent. alcohol, for a few hours before using. The staining methods were always uniform in time; the slides were fifteen minutes in carbol-fuchsin, and decolorized in Pappenheim solution for a similar length of time.

Variations in staining properties of the tubercle bacilli were noted and carefully studied. It was observed that the longer the slides were kept in the decolorizing fluid (Pappenheim), the more marked were the variations in the acid-fast properties? Such tinctorial change in tubercle baccilli have been observed by Dr. Rosenberger in his studies of acid-fast bacilli in the sputum, feces and in the blood, and have been reported by him on several occasions.

In several cases in which relation of acid-fast to acid-semifast bacilli was observed in the sputum, we had the opportunity of obtaining tissue from the lungs at autopsy. Small pieces of such tissue were crushed, and macerated in antiformin. Spreads were made from the sediment obtained from these tissues, and these showed a relationship in the number of acid-fast to acid-semifast similar to that found in the sputum.

Variations in morphology and in staining properties of tubercle bacilli in the sputum led to a study of the organisms with antiformin, pure culture being employed as a control. In this work, as in the previous study, carbolfuchsin and Pappenheim solution were used. Desiring to ascertain whether a similar relationship in the number of acid-fast to acid-semifast tubercle bacilli could be obtained by using decolorizing agents other than Pappenheim solution, we took such as were recommended by standard text-books and authors. Old and young cultures were obtained through the kind assistance of Dr. Rosenberger, from Mulford's Biologic Laboratory, from the Veterinary Department of the University of Pennsylvania and from growths obtained by inoculating glycerinated slants with the sediment obtained by treating tuberculous sputum with antiformin. The spreads from such cultures being left in the various decolorizing agents for definite but variable lengths of time, a relationship in the number of acid-fast to acid-semifast tubercle bacilli was noticed. This relationship varied with the age of the culture, the strength of the decolorizing agent and the length of time which it was employed.

Dissatisfied with conclusions reached because of the indefinite time for which the various decolorizing reagents used were recommended, we determined to take these decolorizing agents in definite strength, and to employ these for definite lengths of time. For this work, we obtained cultures from various reputable laboratories. Subcultures on glycerinated agar were made and these were studied when they attained an age varying from two to four weeks.

The following was the technic employed: New slides, as we have already stated, were used. A drop of sterile distilled water was placed on each slide by means of a sterilized platinum loop. Spreads were made with the utmost care to ensure as much uniformity of distribution as possible. These were fixed by passing three times through the flame, and placed in jars containing carbolfuchsin. These jars were rinsed with pure sulphuric acid and washed in distilled water before using. They were then placed in a water bath which was kept at a constant temperature of 120 F. for half an hour. The slides were removed and placed in their respective decolorizing reagents for definite lengths of time. The stains as well as the decolorizing agents were freshly prepared before using, and the time during which the slides were decolorized was carefully noted.

The technic of counting the bacilli was as follows: A circular cover glass was divided into squares, and etched by means of hydrofluoric acid. Twenty squares in which the bacilli were uniformly distributed were counted, and those squares where the bacilli showed clumps were discarded. On the average 100 bacilli were counted, and the results obtained by employing the various decolorizing agents for the varying but definite lengths of time were charted. Those bacilli that were distinctly red were called resistant; semiresistant those that were pink in color or almost decolorized; and those that were colorless or blue in color, were called decolorized. The blue color was due to the fact that the slides were counter-stained in Loeffler's methylene blue for five minutes, after they were removed from their respective decolorizing agents.

Five cultures were studied:

1. A sixteen-year-old culture (U. S. Department of Animal Industry).
2. A four-year-old culture (Parke, Davis & Co.).
3. A two-year-old culture (U. S. Department of Hygiene).
4. A three-months-old culture (Mulford's Biologic Laboratory).
5. An eleven-day subculture from four-year-old culture (Parke, Davis & Co.).

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* From the Clinical Laboratory of the Philadelphia General Hospital; read before the Pathological Society of Philadelphia, Feb. 24, 1910.

The following were the acids employed in their varying strength, and time:

1. Nitric acid 5 per cent. in alcohol 95 per cent. for 2, 5, 10, 15 minutes.
2. Nitric acid 10 per cent. in alcohol 95 per cent. for 2, 5, 10, 15 minutes.
3. Nitric acid 30 per cent. in alcohol 95 per cent. for 1, 2, 5 minutes.
4. Hydrochloric acid 3 per cent. in alcohol 95 per cent. for 2, 5, 10, 15 minutes.
5. Aqueous and alcoholic (95 per cent.) sulphuric acid 5 per cent. for 5, 10, 15 minutes.
6. Aqueous and alcoholic (95 per cent.) sulphuric 20 per cent. for 2, 5, 10, 15 minutes.
7. Pappenheim's solution for 5, 10, 15, 30 minutes.
8. Sweet spirits of niter for 1, 2, 5 minutes.
9. Glacial acetic acid for 1, 2, 5 minutes.

At the reading of this paper before the Philadelphia Pathological Society an objection was raised to the use of the strong nitric acid in the 95 per cent. alcohol. As we have already stated, the decolorizing fluids were freshly prepared before using, and the 30 per cent. nitric acid in alcohol was controlled by an aqueous solution of the same followed by alcohol and we found that in the fresh state they gave the same results.

A count of the number of the acid-fast, acid-semifast and decolorized forms in the eleven-day-old subculture from the four-year-old culture of Parke, Davis & Co., was not taken owing to the scarcity of the very resisting and the semiresisting forms.

TABLE SHOWING PROPORTION OF RESISTING, SEMIRESISTING AND DECOLORIZED FORMS *

		16-Year Culture			4-Year Culture			2-Year Culture			3-Month Culture		
Acid Used.	Per Cent.	Very Resisting.	Semi Resisting.	Decolorized.	Very Resisting.	Semi Resisting.	Decolorized.	Very Resisting.	Semi Resisting.	Decolorized.	Very Resisting.	Semi Resisting.	Decolorized.
Nitric	5	74	22	4	49	41	10	13	33	54	32	15	53
Nitric	10	73	20	7	34	53	13	14	27	59	34	26	40
Nitric	30	31	45	24	25	51	24	13	35	52	19	4	77
Hydrochloric	3	50	34	16	14	53	33	34	32	34	40	24	36
Aqueous Sulphuric	5	73	13	14	29	27	44	27	28	45	..	..	..
Aqueous Sulphuric	20	17	51	32	34	46	20	14	26	60	..	..	..
Alcoholic Sulphuric	5	25	49	26	44	33	23	23	27	50	36	17	47
Alcoholic Sulphuric	20	23	50	27	19	33	48	27	21	52	28	27	45
Pappenheim	..	42	36	22	30	42	28	24	30	46	61	27	12
Sp. æth. nitrosi	...	33	32	35	19	27	54	13	23	64	40	28	32
Glacial acetic	..	35	44	21	17	48	35	24	32	44	2	20	78

* This work was controlled by the various modifications of the Gram method, such as the Much, Michaelides and Nicolle methods; and these gave results similar to those obtained by the authors just mentioned.

In order to reduce the bulk of charts thus obtained, we combined the results obtained under each acid for the variable lengths of time, and obtained the approximate percentages of the numbers of bacilli decolorized, resistant, and semiresistant with a given decolorizing agent for an average length of time. The table gives the approximate results thus obtained.

About 2 c.c. of an emulsion of each culture were injected respectively into five guinea-pigs of about equal weight. At the end of five weeks, each of the pigs showed gross tuberculous lesions. Most marked however, was the contrast in the lesions presented by the pigs inoculated with the sixteen-year-old, and the eleven-day-old culture. In the former (sixteen-year-old) only a few mesenteric glands and the point of inoculation were tuberculous; while the latter (eleven-day-old) the peritoneum was studded with tubercles, the mesenteric, and the inguinal glands were of the size of a bird's egg, and the liver, spleen and uterus were riddled with tubercles. The tubercle bacilli were isolated in pure culture from each of the pigs.

Various observers, such as Marmorek, Michaelides, Ferran, Fontes and Terebinsky, employing the Ziehl-Neelson method, find acid-fast and acid-semifast tubercle bacilli. The latter they place in the same class as the acid-fast. Much[1], Michaelides[2] and Fontes[3] have devised certain modifications of the Gram stain in order to be able to bring out these acid-semifast forms. Even with these modifications acid-semifast tubercle bacilli are demonstable in pure culture, though they are comparatively much more reduced in numbers.

Much, in his studies of tuberculous pus which was sterile to ordinary culture media, finds forms of the tubercle bacilli not demonstrable by the Ziehl method, but these were demonstrable by cultural methods. Ferran, working independently, finds forms of tubercle bacilli similar to those found by Much. Terebinsky[4] states that at times in pure culture and in infectious pus, one can see tubercle bacilli not equally acid-resistant, and that it is not rare to find isolated ones that are not acid-resisting. He is of the opinion that not only are young cultures non-acid-resisting, but that old cultures may lose their acid resistance under varying conditions.

Marmorek states that in young cultures no acid-resisting bacilli are found. Unna asserts that these bacilli are dead. Marmorek, however, shows that not only are these acid-non-resisting forms living, but that they are virulent. This is entirely in accord with the researches of DeSchweinitz and Dorset.

The investigations carried out by the observers just quoted are entirely in accord with the chemical analysis of the tubercle bacillus. According to the analysis made by Hammerschlag,[5] DeSchweinitz and Dorset[6] and others, the staining property of the tubercle bacillus is due to a highly fatty substance, which in itself gives the acid-fast character to the bacillus. (Fontes) According to chemical analysis, this substance is in greater abundance in older than in younger cultures, and is very scanty in very young cultures. It is to this scarcity of the fatty substance that the lack of acid resistance is attributed.

CONCLUSIONS

Considering the researches of these eminent men, and taking the results obtained in our work, employing old and young cultures, we consider the following points worthy of further investigation:

1. The acid-fast property of the tubercle bacillus increases with the age of the culture.

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[1] Much, Hans: Ueber die nicht saurefesten Formen des Koch'-
1907, viii, 357, 368.
schen Tuberkelbazillus, Beitr. z. Klin. d. Tuberk.,

[2] Michaelides, N. A.: Ueber eine durch die Ziehl-Färbung nicht darstellbare Form des Tuberkelbazillus, Beitr. z. Klin. der Tuberk., 1907, viii, 79.

[3] Fontes: Untersuchungen über die chemische Natur der den Tuberkelbacillen eigenen Fett und Wachsarten und über das Phänomen der Saureresistenz, Centralbl. f. Bacteriol., Erste Abt., 1909, xlix, 317.

[4] Terebinsky, W. J.: Sur la significance des formes non acido-
résistantes du bacille tuberculeux; leur rapport avec le bacille de la
lèpre. Ann. de dermat. et de syph., 1908, Series 4, ix, 503.

[5] Hammerschlag: Chemische. Untersuchungen über Tuberkel-
bacillen, Centralbl. f. klin. Med., 1891, xii, 9.

[6] DeSchweinitz and Dorset: Composition of the Tubercle Bacilli
Derived from Various Animals, Centralbl. f. Bakteriol, 1902, xxxii,
186.

2. In old cultures, isolated bacilli are found which are non-acid-resisting, and these bear a relationship to the acid-resisting forms.

3. The number of acid-non-resisting forms and the acid-semiresisting forms are relatively increased in young cultures.

4. In very young cultures, mostly acid-non-resisting, more semiresisting and very few acid-resisting forms are present.

5. The semiresisting forms when removed from the decolorizing fluid, and placed in a solution of methylene blue of definite strength, will gradually assume that color in proportion to the time that the slide was left in.

6. No [illegible] agent at present employed will stain uniformly all bacilli that cause demonstrable tuberculous lesions.

7. No decolorizing agent at present employed in the examination of any tuberculous material is efficient enough to bring out the presence of acid-non-resisting forms. This is brought out by the work of Much, Terebinsky, Michaelides, Ferran, Duval and others.

8. Acid-non-resisting forms have been demonstrated in tuberculous lesions of the lymphatic system by Much, Terebinsky and Duval; also in cavities of the lung, and in sputum by eminent observers. Such forms were demonstrated by cultural methods when they were not demonstrated by staining methods.

In concluding, we wish to express our thanks to Dr. Rosenberger for the valuable suggestions that he had made, and for the deep interest that he had taken in the work throughout its entirety.

THE OBLITERATION OF THE CRAVING FOR NARCOTICS

REVIEW OF THE ARTICLE OF DR. ALEXANDER LAMBERT

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An article with the title "The Obliteration of Craving for Narcotics" appeared in The Journal, Sept. 25, 1909, and at a later date in a number of other journals; and the same article was reviewed to some extent in the Department of Therapeutics in The Journal, March 5, but there is so much in Dr. Lambert's article which is calculated to lead those who attempt to follow his teachings into serious error that I deem still further comment pertinent.

His article seems to be based on the assumption that the essential nature of the narcotic drug addictions is an appetite or "craving" for narcotics, and that this appetite or craving can be obliterated or overcome by an antidote or "specific." For such a "specific" he proceeds to give a formula.

This assumption is erroneous and the remedy proposed is not a specific. The demand of the system of the drug habitué, his inclination to take it, his desire for repeated doses of his particular drug, spring from a physical condition and not from a mere appetite such as the word craving ordinarily would be understood to imply.

The habitual use of a narcotic drug brings about marked functional derangement of every organ in the body. The bowels are habitually constipated, the portal system is engorged, digestion is deranged, the heart is overworked, the motor function of the bowel is greatly impaired, the activity of all the secreting and excreting organs is diminished, the body is poorly nourished and the entire system is saturated with the products of tissue disintegration; in fact, an intense toxemia exists. The nervous system is made to tolerate the presence of this toxic matter by keeping it constantly benumbed by the primary effects of repeated doses of the narcotic.

The urgent demand for a repetition of doses of the narcotic, the so-called craving, is due mainly to the effects of toxic matter on the nervous system. If this toxic matter is removed from the system, and just in proportion as it is done, the demand for the narcotic ceases, the so-called craving disappears, without the intervention or aid of any "specific" remedy. That Dr. Lambert obtains the results he records I do not question, but I am sure that he gives more credit to the belladonna preparation which he terms a specific than it deserves. That a remedy of this class does meet one of the indications in the treatment of such cases I will show later, but that it is the principle curative agent, or even the principle factor in overcoming the so-called craving, I deny. *In the treatment of any disease the removal of the cause is of first importance.* It is easily capable of demonstration that the toxic matter in the system of a drug habitué is the source of the demand for repeated doses of the drug; in fact, is the essential pathology of the addiction. When this pathology is overcome, when the system is freed from toxic matter, the craving or demand for the drug disappears as soon as the secondary effects of the opiates are exhausted without further treatment of any kind.

Dr. Lambert well urges the necessity for free purgation, but the purgative compounds he recommends are extremely drastic and the extent to which they are administered places an unnecessary tax on the strength of the patient. Drug habitués as a rule are very anemic, their blood is thin, their tissues are poorly nourished, they have no strength to spare; therefore in preparing them for the withdrawal of their drug, or in treating them subsequent to it, the most scrupulous care should be exercised to preserve their strength. While the administration of purgatives is essential in any effort to free the system from toxic matter, these should be selected and compounded so as to act in the most conservative manner and to place the least tax on the resources of the system. No purgative compound which depends on reflex action to excite the motor function of the bowel, as does those recommended by Dr. Lambert, meets this requiremnt.

Dr. Lambert finds great difficulty in getting purgatives to act. This is true because, in drug habitués, the motor function of the bowel is more completely suspended than the secretory function of the glands. In order to secure evacuation of the intestinal contents it is equally as necessary to stimulate the motor function of the bowel as the secretary function of the intestinal glands. Notwithstanding this fundamental proposition, Dr. Lambert administers glandular stimulants and trusts to their irritating qualities, or to the irritating qualities of the secretion they induce, to excite peristalis, the other essential condition to bowel movement. When the nerve centers are profoundly impressed with narcotics, as in the case of drug habitués, reflex action alone is not capable of exciting efficient peristalsis unless such reflex action is induced to an exaggerated degree. If glandular stimulants are given in such quantities and of such an irritating quality as to excite this exaggerated degree of reflex action they cause much distress, colic, griping, nausea, etc., and when they do finally act they act with undue severity and exhaust the strength of the patient. On the other hand, if the motor function of the bowel is induced by direct stimulation of the motor centers, then much less of the glandular stimulant is required; it acts more promptly and efficiently and with much less tax on the resources of the patient.

There is no question but that the emunctories should be thoroughly aroused and free purgation obtained, but any course of treatment which involved the giving of purgatives, equivalent to 30 or more compound cathartic pills in less than three days' time, as does the plan advocated by Dr. Lambert, is extremely drastic and in my opinion involves an unnecessary waste of the patient's strength. Better results can be obtained with far more conservative measures.

Strychnin, in sufficient quantities to overcome the semiparalyzed condition of the intestine and to excite active peristalsis, is an essential ingredient of any purgative compound intended to empty the intestinal canal of a drug habitué, if that is to be accomplished without undue waste of the patient's strength. The administration of glandular stimulants (chemical irritants) to a drug habitué in such large quantities as to bring about a storm of irritation in the upper part of the intestinal canal sufficient to excite efficient peristalsis by reflex action is as unreasonable as the effects are unpleasant and exhausting. The principles on which a physiologic purgative compound for a drug habitué may be made, as well as many other details of the treatment, were fully set out in my paper[1] published in 1901. Had Dr. Lambert been familiar with that paper he would not have found so much he considered new in the Towns method.

Morphin or other form of opiate profoundly blunts the sensibilities of the nerve centers and this results in immediate and total arrest of intestinal motion. If these remedies checked secretion as promptly and completely as they do peristalsis they would be far more deadly than they are. It may be accepted as established that the essential pathology of narcotic drug addiction is toxemia. These toxins are of drug, intestinal and systemic origin.

If the system is freed from toxic matter and the portal system disengorged, morphin or other narcotic can be at once withdrawn without shock, collapse, heart failure, diarrhea or other dangerous symptom, and the suffering incident to such withdrawal will subside in a few days' time without further treatment of any kind. The patient would suffer severely during these days, but if the system has been fully cleansed of toxic matter by thorough, persistent physiologic means, all desire for the drug, as well as all necessity for its use, disappear as soon as the secondary effects of the opiate have become exhausted, and this point is reached by or before the end of the fourth day from the withdrawal. The suffering during these days can be materially reduced if not entirely obviated by the judicial administration of belladonna or any one of the remedies of that series. It is much better to administer these remedies in the form of their alkaloids than to use the tincture or fluid extract, as these vary too much in strength and are unreliable. Then again, the patient's stomach is usually disordered and not in condition for prompt or uniform absorption of the medicinal agent; therefore, the stomach should not be depended on for the absorption of the remedies on which comfort depends when the individual can be promptly and certainly brought under the influence of the active principles of such remedies by hypodermatic administration.

Atropin, hyoscyamin, scopolamin, deboisin, or stramonium will serve the purpose if the patient is an opium habitué, and I have not been able to see any advantage in combining them. Any one of these alone seems to keep the patient in as comfortable a condition as do two or more of them combined. If a patient is brought to the same degree under the influence of any one of these alkaloids I do not believe that any clinician is expert enough by examining the patient or from his expression or conduct to tell which of them has been given. The office of a remedy of this class is not to cure the patient, not to act as a specific or antidote, but to serve as an anodyne or anesthetic and keep the patient in comfort while the elimination—the real curative measure—is being carried out or completed and while the secondary effects of the opiate die out. The painful reactionary symptoms which appear on the withdrawal of the opiate from an habitué are due mainly, as above stated, to the effects of the toxic matter on the nerve centers, but they are also in part due to the secondary effects of the opiate. So long as the opiate is given in regularly repeated doses the patient is kept under the primary, anodyne or anesthetic effects of the drug, but when it is discontinued the primary effects cease and the secondary effects appear. The anesthesia caused by the primary effects of an opiate when taken by an habitué is, on its withdrawal, succeeded by hyperesthesia equally marked and of greater duration. This hyperesthesia has a natural limit and terminates when the secondary effects of the opiate have become exhausted and the patient reaches a state of placidity and comfort because this hyperesthetic state has reached its limit and terminated, and not because he has had "a liquid green stool composed of mucus and bile." An important part of the office of the belladonna group is to obtund the sensibilities of the nervous system to this hyperesthetic state and thus protect the individual from suffering. It should be used with this idea in view and not with any thought of it as a "specific" cure for the drug addiction.

I do not believe that the prickley ash in the Towns formula has any value whatever. All that this combination will do can be accomplished by either of the other remedies alone or by the two combined without any aid from the prickley ash.

With the hope of making the principles of treatment herein suggested of practical value, I will give in detail an outline of treatment suitable to an uncomplicated case of morphinism in which the patient is taking not more than 10 grains of morphin a day.

Thorough elimination of toxic matter from the system is the primary and most essential step in the treatment. The principal obstacle to securing action of purgatives in drug habitués arises from the suspension of peristalsis by the primary effects of the opiate. During a period varying from 4 to 8 hours from the time of taking a dose of morphin intestinal motion is almost if not entirely absent, but as the early effects of the dose subside peristalsis is again gradually reestablished. Drug users as a rule take their drug only during the day or from the time of rising in the morning till bed time, say from 8 a. m. to 10 p. m. During these hours the system is kept constantly under the primary effects of the opiate and intestinal motion is very much restricted, but between 10 p. m. and 8 a. m. the effects of the day's dosing wear away and peristalsis becomes fairly active, and it is during the latter part of this period that the excretory organs do the principal part of their work.

In order to secure sufficient action of purgatives, advantage must be taken of this state of affairs and the remedies so compounded and given at such time as to have the acme of their effects, both as motor and secretory stimulants, occur during the latter part of this period, when the system is least under the restraining influence of the opiate. To do this, begin at 2 p. m. and give, on an empty stomach, a capsule containing the following:

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[1] Therap. Gaz., October, 1901.

Calomel			
Powdered extract cascara, ãã............	13		gr. ii
Powdered ipecac	016		gr. 1/4
Phenolphthalein	06	or	gr. i
Atropin sulphate	0002		gr. 1/200
Strychnin nitrate	002		gr. 1/30

Repeat a capsule of this size and strength at intervals of 2 hours up to 10 p. m., making 5 such doses. The patient is given his drug in the usual sized doses up to 8 or 10 p. m., but none is to be given from that time until after the bowels have been thoroughly emptied on the following morning. Nothing in the way of nourishment should be allowed to go into his stomach during a period beginning as much as 6 hours before the time of giving the first purgative capsule and ending after the purgation is completed. Then the patient may be given nourishment.

With a patient of average size and weight, taking not over 10 grains of morphin a day, the strychnin and atropin in these capsules will excite a fair degree of peristalsis notwithstanding the restraining effects of the opiate, and this will enable the glandular stimulants given with them to induce free evacuation from the bowel in from 8 to 10 hours from the time the last purgative capsule was given, thus securing bowel movements before the time for the usual morning dose of morphin; but, more certainly to secure this result, 6 hours from the time the last purgative capsule was given 1/20 gr. strychnin should be given hypodermatically and followed half an hour later with 2 ounces of castor oil or a bottle of citrate of magnesia; both the strychnin and the oil or saline should be repeated at intervals of 2 hours until the intestinal canal has been thoroughly emptied. No morphin or other narcotic is to be given during this time. If the bowels begin to act before the time for taking the usual morning dose of morphin the patient will experience no discomfort, but, on the contrary, the relief afforded by the active elimination will be such as to enable the individual to go several hours beyond the time for the morning dose without feeling the need of it, and this should be done, thus allowing as much time for elimination as possible. When the patient has gone as long as he can without discomfort and begins to feel the need of the drug it should be given, but in reduced doses. It will be found that after the bowel has been thoroughly emptied and the patient has gone without the drug several hours beyond the usual time for taking it, not more than half the morphin he had been taking will be required to meet the demands of the system. This reduced quantity should be given at the same intervals at which the individual had been taking doses of morphin and a liberal diet should be allowed.

Forty-eight hours from the time the first purgative course was begun, another, in 5 capsules of the same size and strength, should be given, preceded by 6 hours' fasting.

The patient should be given the morphin in as small doses as will keep him comfortable up to the time of his evening or bedtime dose on this day, and this should be the last opiate given in the case. Six hours from the time of giving the last capsule of the second purgative course, the strychnin and oil or saline should be given as before and repeated if necessary until free bowel movements have been obtained. During this time the patient should be given a bath and put to bed.

The action of this course of purgation will carry out of the system a residue of extremely toxic matter and the patient will experience such relief from it as to enable him to go even longer beyond the time for his accustomed dose than he did after the first course, especially if he remain in bed, which he should do. In the course of from six to eight hours after the time for his morning dose, however, he will begin to feel uncomfortable and require something for relief; then, instead of giving the opiate as before, scopolamin, 1/200 gr., should be given hypodermatically and the same dose repeated in 30 minutes.

The patient will usually fall asleep within half an hour from the time of giving the second dose of scopolamin, but if not, and if he is at all uncomfortable, a third dose of the same size may be given. If the patient is not uncomfortable, let him go until the lapse of an hour from the time of giving the second dose. If at the end of that time he has not fallen asleep a third dose should be given. This dose may be of the same size of the other two or it may be increased to double that size, depending on the degree of impression made by the preceding doses. If the patient has no unusual tolerance for the drug, these doses will bring him under the influence of the remedy to such a degree as either to induce sleep or to establish a slight belladonna intoxication, in either of which conditions he is free from suffering. If he goes to sleep he should be allowed to sleep until he wakes, even if that be 6 or 8 hours, but when he does wake, no matter how comfortable he may feel, an additional dose of scopolamin should be given; usually 1/200 gr. is sufficient, but that must be regulated by the susceptibility of the patient. These doses must be repeated at such intervals as may be required to keep up a mild belladonna intoxication and keep the patient free from pain. He may sleep more or he may not, but that does not matter so long as he is kept in a comfortable condition. He should be impressed to this degree with scopolamin for a period of 36 hours from the time of beginning this remedy, and then all narcotic medication should be discontiued.

During the time the patient is kept under the influence of scopolamin it is usually well to give 20 grains of sodium hyposulphite every 2 hours, and these doses should be continued for 24 hours or more after the scopolamin period has passed. These small, frequently repeated doses of hyposulphite supplement the effects of the calomel purge and after they have been kept up for from 24 to 36 hours the patient will begin to have small, billious stools, unattended by colic, griping or other distress, and these will more fully cleanse the system from toxic matter and prepare the patient for a rapid and successful convalescence. This period is reached by the end of the fourth or fifth day from the beginning of treatment, after which no medication is indicated, so far as the addiction itself is concerned. The patient will have no desire for his drug nor will he suffer because of abstinence from it. It is true he will feel weak and miss the support of the artificial stimulant to which he has been accustomed, but the unbearable nervousness, hot flashes, aching of the limbs, labored heart action, sweating, diarrhea, restlessness and insomnia so marked under most other plans of treatment will be absent and the patient will be able to lie quietly on the bed, pass his time in comfort, and not only will he enjoy taking nourishment, but he will digest and assimilate it in liberal quantities. So marked is this feature that it is not at all unusual for patients thus treated to gain a pound a day until they have fully regained their normal weight.

If the heart action is at all deficient either during or after treatment, spartein sulphate in doses of 2 grains at intervals of from 4 to 6 hours will give it reliable and uniform support, and this without detriment to the patient; but it is rarely necessary to use anything for this purpose. The relief afforded the heart by cleansing the system from toxic matter and unloading the portal system is more than enough to compensate for any support it had been receiving from the opiate and the circulation is better than it was under the opiate.

The after-treatment does not consist in the administration of medicine. Certainly strychnin, alcohol and all other stimulants should be avoided. The patient should be given a reasonable quantity of light digestible food and encouraged to take out-door exercise and to spend his time in lively company, with games, music and other diversions of an innocent character. The period of convalescence, from one to two months, should be spent under the direct supervision of his medical advisor and preferably in an institution devoted entirely to the treatment of this class of patients. It is a mistake to undertake the treatment of such patients at their homes or in a general hospital. Such environment does not give the physician that degree of control of the patient and his surroundings as to enable him to give the patient the protection he requires; neither do they afford the accessories which may be used to the great advantage of the patient. In a properly equipped institution, hydropathy, electricity, massage and other such rational means are at hand and can be employed to meet any slight complications from which the patient may suffer, and thereby avoid the administration of medicine and more perfectly wean him from dependence on drugs.

The active therapeutic measures required in the treatment of these cases are completed in a few days' time, but the patient must not be considered cured simply because he has been taken off the drug and brought to a condition in which he no longer wants or requires it. Discreet supervision during the period of convalescence is as essential to the permanency of the cure as the therapeutic measures were to its beginning. The patient must be given every aid possible to regain his self-control and must not be thrown on his own resources until he has fully reached that point.

The above outline is as complete as space will admit of its being made, but much is left out which might prove helpful in some cases. No two cases of morphinism are exactly alike and no routine treatment can be devised which will meet the requirements of every case; however, only two of the remedies suggested will, ordinarily, need to be varied in quantity or time of administration. These are the strychnin and scopolamin. The more opiate that is being used the more strychnin will be required to overcome its paralyzing effects on the motor function of the bowel. The age, weight and physique of the patient must also be considered in determining the quantity of strychnin required. The difference in the susceptibility of different persons to scopolamin is very great and the range of dosage is wide; therefore the only correct rule is to begin with small doses and repeat at short intervals until the impression desired is made and then regulate the size and frequency of the succeeding doses by the effects obtained from those which have preceded it.

In a work which I am preparing for the press I am devoting more than 100 pages to the discussion of these and other details of the treatment of this class of cases and I hope to make this work so complete that one seeking specific information on these points will not be disappointed.

Before closing this paper I think I should say a word as to the mental attitude of the physician who essays to treat patients of this class. To succeed, he must divest his mind of the notion which most physicians have that these cases are shrouded in some mystery, that there exists some obscure nerve lesion or other undefinable pathology which renders the patient distinctively different from other sick people. If such conditions exists, they vanish under the application of remedies according to the general principles of medicine and the exercise of a little common sense.

958 South Fourth Street.

THE TREATMENT OF TUBERCULOUS CERVICAL ADENITIS BY THE ROENTGEN RAYS

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The permanent cures which are effected by the Roentgen rays without the production of scarring or disfigurement have rendered this method of treatment particularly adaptable to those lesions which are situated on the face and neck. The cosmetic result is particularly valuable in the treatment of enlargements of the lymphatic glands in the neck, but is also advantageous in epithelioma, rodent ulcer, lupus, acne, particularly the indurated form, and the severer forms of eczema.

In these conditions excision, curettement, freezing and other corrosive applications are employed in rebellious cases, and are necessarily the cause of scarring which produces marked disfigurement. This is entirely avoided by the Roentgen treatment, under which, even where there has been a marked destruction of tissue, a normal condition, or only a very slight amount of scar tissue, is produced. In cases in which there has been no deep erosion the restoration to the normal is perfect and no scar is visible.

In the treatment of tuberculous cervical adenitis, the avoidance of scars is complete, unless the case has progressed so far that suppuration is present. There is, however, a factor of much greater value in this method of treatment. The results are permanent, even in cases in which recurrence has followed repeated operations. This results from the complete conversion of the lymphatic glands, and particularly the lymph channels into purely fibrous tissue, thus eliminating entirely the possibility of the spread of the disease.

The reason for this is that the Roentgen rays have a selective action, destroying first the tissues of lowest vitality and development by converting them, as has been demonstrated by operation and pathological examination, into fibrous tissue. The early destruction of the lymphatics has the advantage of isolating the disease in the lymph-nodes, which are finally absorbed. Patients sent early, therefore, can be cured without scarring or the breaking down of a single gland.

This is a consideration of special importance, as the disease occurs most frequently in young women and girls, and since the treatment is harmless, painless and produces no scarring, the consent of the parents can be obtained when the disease is in its incipiency and treatment is most effective. It can also be carried out in conjunction with medical treatment under the supervision of the family physician.

The systemic effect of the Roentgen treatment of tuberculous adenitis has been studied by its effect on the opsonic index. It has been shown that the opsonic index of the patient rises as treatment progresses, but that it will fall into the negative phase, and the progress of the patient will be greatly retarded, if treatment is too severe.

To be effective, this treatment must be adapted to the individual patient. If the dose is too weak there will be no progress; if pushed too far, improvement ceases, and a favorable termination can be secured only by judicious treatment of the negative phase on which the patient has entered. To be effective, this treatment must be employed by a capable clinician, who can appreciate the effect of the remedy as employed. The failure to secure permanent results can also be explained with this knowledge as a basis.

The variations of the opsonic index of these patients under Roentgen treatment leads to a plausible explanation of the effect produced on lesions at a distance, by treatments applied locally to the enlarged glands in the neck. The evidence of these changes makes it probable that an autogenous vaccine or antibodies are produced which pass through the patient's system, as the result of the destruction of the tuberculous tissues in the involved glands, and that they affect tuberculous foci at a distance from the lesions under treatment.

The Roentgen diagnosis of pulmonary tuberculosis has shown that the lungs become infected directly, that is, in the congested pulmonary tissue, or that this is preceded by an earlier infection and enlargement of the peribronchial lymph-glands. This has been shown by cases in which the symptom-complex, with or without the presence of the tubercle bacillus, pointed to a tuberculous lesion which could not be demonstrated by methods of physical diagnosis, and in which notwithstanding, the Roentgen examination showed enlarged peribronchial glands, and repeated examination of the sputum afterwards discovered the tubercle bacillus.

In one of the cases here reported, a Roentgen examination showed that in addition to the cervical glands the peribronchial glands were also enlarged. A second examination a year later, when the cervical glands were nearly gone, showed that the peribronchial glands had been entirely absorbed although they had not been in the field under treatment. This was also true of the post-cervical glands, which on account of the hair had not been treated. Thus there is evidence of a systemic effect which can reasonably be explained as the result of autogenous antitoxins or antibodies produced in the patient's system by the destruction of the tuberculous glands during the Roentgen treatment. In any patient having tuberculous cervical glands it is therefore probable that efficient treatment will produce an autogenous vaccination which will destroy other foci and confer some degree of immunity.

The Roentgen treatment of cervical adenitis is not confined to the earlier forms, although it is in these cases that the best cosmetic results can be obtained. Patients who have had repeated recurrences after operation, or in whom ulcerations and sinuses still persist, can be successfully treated by this method.

In the earlier cases medical treatment should not be persisted in too long, as there is danger of softening, suppuration and scarring. The medical measures can be continued in conjunction with the Roentgen treatment, since they are directed towards the increase of bodily vigor. This group is composed of the cases of children and young adults, who when seen early can be cured by a short course of treatment.

The second group of cases is composed of those in which recurrence has followed a complete operation with entire healing of the skin.

Case 1.—Miss C. M. H., aged 20, who has been referred to above, will represent these cases. She had had two radical operations within the four years previous to coming for treatment, and besides, numerous suppurating glands had been opened. A mass of glands filled the left side of the neck between the clavicle and the inferior maxilla, extending laterly beyond the line of the jaw. There were numerous glands on the right side and in both posterior cervical lymph chains. A Roentgen examination showed the peribronchial glands to be enlarged. Under irradiation of the anterior cervical glands alone, all the glands disappeared, including the peribronchial, which a second examination failed to reveal. In addition, the wide scars resulting from the previous operation, and a disfiguring mass of scar tissue where a drainage tube had been inserted, have been rendered white, soft and less noticeable.

The third group of cases comprises those in which after surgical operations sinuses persist and the scars refuse to heal after prolonged antiseptic treatment. In these cases Roentgen treatment in addition to antiseptic precautions produces permanent healing with a decrease in the amount of scar tissue.

Case 2.—Mrs. C. M. S., aged 57, had had for over six years persistent sinuses and open scars that refused to yield to careful surgical dressings. In addition there were enlarged glands. All of these lesions yielded to Roentgen treatment and the patient has remained well for the past four years.

It is therefore evident that Roentgen treatment is the most effective method of treating tuberculous cervical adenitis in all its varieties, and that the best cosmetic, and equally permanent results can be obtained in the early stages of the disease without operation, and at a time when the consent of patient and parents can be readily obtained.

112 South Twentieth Street.

THE SPIROCHÆTA PALLIDA

ITS RELATION TO THE TONSIL

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In an earlier communication,[1] dealing with the diagnostic significance of the *Spirochæta pallida* in various syphilitic lesions, we had occasion to refer to the fact that it was possible to obtain this micro-organism from the tonsils of individuals suffering from syphilis. It is to amplify that reference that this short contribution is made. The observation *per se* is not new and is referred to in Hoffmann's latest review dealing with the spirochete.

I was led to examine the following series of tonsils for two reasons: (1) in the routine examination for *Spirochæta pallida* I found that gland puncture was of very little practical value; negative findings were all too frequent even in cases with marked secondary signs. This seemed to be due to the large number of cellular elements which obscured the field. As I found no method of avoiding these to be satisfactory, it occurred to me that I might more easily obtain serum from the tonsil. (2) in the examination of various mouth lesions I had already found that the enlarged tonsils often found in secondary syphilis yielded large numbers of the *Spirochæta pallida*, and this quite apart from any ulceration or patchy condition of their surfaces.

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[1] The Journal A. M. A., March 19, 1910.

These two facts then led me to examine the tonsil in all its forms in primary, secondary and tertiary syphilis. By far the greater number of the patients were in the secondary stage, although not a few examinations occurred before definite secondary signs had been observed. In brief, the findings are as follows:

When the tonsils are patchy, or show superficial ulceration, the *Spirochæta pallida* is found with the same frequency as from a mucous patch elsewhere, *i. e.* almost invariably.

When the tonsil presents no superficial lesion, but is enlarged and hyperemic, spirochetes are found invariably, in my experience.

When the tonsil presents no lesion and no hyperemia but is slightly enlarged, and perhaps shows a tendency to bleed easily on scraping the surface, spirochetes are to be found with a large degree of certainty.

When the tonsil presents an absolutely normal appearance, it is possible in most cases of secondary syphilis to find the spirochetes.

When syphilis is not present I have never found the *Spirochæta pallida.*

The method of examination is as follows: After anesthetizing the pillars of the fauces and soft palate by means of a swab moistened in a 10 per cent cocain solution, the surface of the tonsil is cleaned by rubbing with a cotton swab or by curetting away any surface débris. One then continues gently to curette the surface until blood-stained serum appears. This is caught on the clean curette, transferred to a perfectly clean slide, immediately covered with a cover glass and allowed to make as thin a film of serum as possible.

The search is carried out on the dark field illuminator. It is also possible to make use of stained smears, in which instance the following modification in staining has been found useful:

Fix the thin fresh smear over osmic acid (1 per cent.) vapor for 30 seconds; flood with Giemsa's one solution stain, 1 part to 10 or 15 parts distilled water (the water should be rendered very faintly alkaline by means of a drop of potassium carbonate solution). The slide is gently heated for from 3 to 5 minutes, avoiding precipitation and renewing the stain if necessary. The spirochetes stain more darkly by this than by any other method known to us.

In order to avoid self-deception in dealing with the spirochetes of the tonsil it has been necessary, in my experience, to observe the following safeguards:

1. One should recognize as *Spirochæta pallida* only such forms as conform in all particulars, such as length, number of spirals, delicacy, staining peculiarities, or, in the living state, the even rotation of the spirochete about its long axis. This even rotation is almost peculiar to the *Spirochæta pallida* and is due to the regularity of its spirals and to the fact that its extremities end as a regular continuation of the spiral.

2. One should take care to avoid surface contamination and to obtain the serum from the deeper parts.

It thus follows that when we find typical spirochetes in a field of clear serum, with a few red and white blood cells, and unaccompanied by other types of spirochete, we can diagnose syphilis with certainty. On the other hand, when surface epithelium is present, with little true serum and several varieties of spirochetes, it is hazardous to diagnose syphilis.

The principal spirochetes which demand differentiation, are: 1. A delicate spirochete with spirals of about the same size as those of the *Spirochæta pallida*, but not more than 7 or 8 in number; it is always found in the neighborhood of epithelial débris and never in the pure serum. 2. A spirochete of about the same length as the *Spirochæta pallida* and possessing 8 or 9 spirals. It is however somewhat coarser and its spirals and movements more uneven. When at rest it is scarcely distinguishable from the dead *Spirochæta pallida*, but on staining takes a deeper stain. It, too, is a surface organism.

Both these organisms occur in normal throats but are more plentiful when the tonsil is enlarged or inflamed. Both deserve the name of pseudo-pallida.

Analysis of these findings permits of the following grouping: In all 68 tonsils were examined: Fourteen cases were normal or abnormal, but not syphilitic; none of these tonsils showed the *Spirochæta pallida;* ten cases occurred in primary, secondary and tertiary syphilis, with negative findings. Forty-four cases occurred in secondary syphilis; all of these yielded the *Spirochæta pallida* from the tonsil.

These various groups require a word *in extenso*:

1. Of these 14 cases, 8 occurred in normal throats, and in 6 patients the tonsils were abnormal either from acute tonsillitis or from hypertrophy. Other spirochetes were most numerous in the abnormal throats, though present in almost every instance in the superficial tissue. 2. This group consisted in part of patients with tertiary syphilis without throat lesion, or of latent secondary syphilis, the patient having been under treatment for varying lengths of time. One was a case of primary syphilis before general glandular enlargement, and five were patients in whom a diagnosis of secondary syphilis was certain, or suspected on sound grounds. No *Spirochæta pallida* were found in any of these cases. 3. This group is composed of 44 cases of secondary syphilis, in all of which the *Spirochæta pallida* was found. That these were cases of genuine syphilis is vouched for in a few cases by the effect of treatment, but in the majority of instances by the presence or sequence of other syphilitic lesions, often with the finding of the *Spirochæta pallida.*

As I have already noted, the number of spirochetes is likely to bear a direct ratio to the size, hyperemia and superficial lesion of the tonsil. Keeping this in mind we may divide the group as follows:

a Tonsils enlarged and patchy, 17; all with positive findings. In 7 instances the diagnosis of syphilis was at first only to be made on the appearance of the throat and the positive findings.

b Tonsils enlarged, not patchy or ulcerated, but often hyperemic, 7 cases. In the majority of these cases diagnosis was made on the throat finding alone.

c Tonsils, normal in size and appearance, 20 cases. In 9 of these the diagnosis of syphilis was made at first instance on the positive spirochete finding alone.

To draw absolute conclusions from such a series of cases would not be justifiable. Certain cases, however, point out certain possible deductions.

Case 149, in which the primary lesion had first appeared 13 days previous to examination, showed no general glandular involvement, and gave negative results from the tonsils. In the majority of those cases which showed general glandular involvement *Spirochæta pal-*

lida were recovered from the tonsil. It is probable, therefore, that generalization of the virus affects both tonsil and glands about the same period, and it is possible to diagnose this stage definitely by obtaining the *Spirochæta pallida* from the tonsil.

Case 146 would support the diagnostic value of such examination. This patient was a young girl, undersized, whose age was stated as 13 years. She came to the nose and throat department of the hospital for what was looked on as hypertrophied tonsils. As she spoke little English, the history was uncertain. We had occasion to make use of her as one of the controls and were considerably astonished to find the *Spirochæta pallida.* The question of syphilis had never been mooted but on careful investigation the patient was found to be 16 years of age, the mother of a child, and subsequently developed mucous patches.

Those patients who have been well treated have always failed to show the *Spirochæta pallida* as have the tertiary cases, with the possible exception of a single badly ulcerated tonsil with indefinite history, and of the tertiary type.

In conclusion, it would appear possible to obtain the *Spirochæta pallida* from the serum of the tonsil in from 80 to 90 per cent of patients suffering from untreated secondary syphilis (44 out of 49 cases in this series). This is possible from the period of general glandular enlargement until the end of active secondary signs, or until the effect of treatment has been manifested. This fact has proved of diagnostic importance in a number of cases of early secondary syphilis.

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THE TRUTH ABOUT TONSILS AND ADENOIDS*

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The common appearance of highly complex tonsillar tissue occurs only in the highest types of animal development. Its noticeable presence occurs in a large majority of persons. It is fair to assume, accepting Darwin's theory of the origin of species, that the development of the tonsils is a detail of highly civilized type-variation which is becoming, if indeed it has not already become, a characteristic. If the presence of this development were detrimental—if the tonsils were the bugaboo they are often pictured—they would long ago have disappeared with their owners under the law of survival, instead of appearing now in their most complex form almost universally in the highest types of human kind, as the sturdy guardians of the dangerously exposed introitus of the two great systems, digestion and respiration. I say "highest types of human kind" advisedly, and it is interesting to note, for perhaps it adds a little weight to the argument, that the embarrassing presence of tonsillar tissue in the negro, for instance, is not common, and I have never once seen it that I can recall, in the pure black. It is occasionally seen in the mulatto, and oftener as the mixed type approaches nearer to the pure white stock. At all events it has been shown [Packard] that the tonsil is not a vestigial remnant, for its appearance has been demonstrated from its simplest form in the lowest of the vertebrates, to its most complex form in man.

Systematic inspection of the throats of hundreds of school children convinces me that the noticeable presence of tonsillar tissue is normal, at least up to the age of puberty, and probably later. Furthermore I have been unable to observe that there is any fixed, or even approximate, period of life at which tonsillar atrophy occurs. It may take place at any age according as artificial or natural influences bear on the condition.

In a large number of cases the swollen tonsils are, in my opinion, a purely compensatory hypertrophy—a line of defense thrown out by Nature to protect the mouth-breather—taking up in a measure the functions of the nasal turbinals, and when proper nasal breathing is reestablished in these cases the hypertrophied tonsils shrivel and withdraw. These are essentially the lymphatic type of hypertrophy; but even the evidently fibrous type often exhibits an astonishing tendency to shrink. Such compensation is not unique. It occurs variously in the human economy; and, indeed, all Nature is full of such automatic manifestations.

Another point, which seems to have escaped attention is this: Modern research has made us familiar with certain principles of immunization. We know that we are constantly exposed to the deposition of pathogenic bacteria on the surfaces of the upper respiratory and alimentary tracts. We know that comparatively few of us develop systemic infection. Furthermore, we know that imprisoned colonies of these bacteria are very frequently, if not constantly, found in the tonsillar structure. In the light of our present knowledge it is then apparently certain that the absorption of toxins from the imprisoned colonies must effect a certain systemic immunization. There appears to be no alternative to the deduction. This theory is in no sense controverted, nor is its force weakened, by the fact that there are times when, owing to weak resistance or to an excessive amount or excessive virulence of the infection, the tonsillar barrier is broken down and the lymph structures are overwhelmed by the poison. There are two theories extant regarding the possible tonsillar obstruction, one being that this tissue presents a mechanical barrier to the entrance of the bacteria, and the other that the bacteria are destroyed in the tonsil by some process of phagocytosis. Granting the partial truth of these theories, it must be admitted that they contain certain weaknesses, and they differ essentially from the theory of the tonsil as an agency for immunization which is offered here for serious consideration.

The hypertrophied tonsil often cannot be distinguished by the naked eye, or by palpation, as being of the fibrous or the lymphatic type. It may combine the features of both forms. The fibrous tonsil, as we know, is usually seen in the adult. Ten years ago, whenever I saw one I urged operation. Not strangely, many adults decline operations on themselves, unless some immediate and dire danger is presenting. As a result, I have seen many a protruding member in the fauces of adults which never had caused and I believe never would cause, serious trouble of any sort—provided, as I have said, nasal breathing is free and unobstructed, the preservation of which latter function, it is my conviction, is the real crux of a very large proportion of this vastly important tonsil problem.

The majority of the cases of recurrent quinsy which have come under my observation have been associated with the so-called submerged and ragged tonsils, or the roughly flat formations, densely adherent to the pillars. These are the cases which merit prompt and thorough surgical attention, but on account of the difficulties involved, and with which we are familiar, these are also the cases in which too much careless and incomplete work is done on the tonsils. And, *per contra,* on account of the comparative ease with which the firm protruding type is handled, there is, I believe, entirely too much radical work done on them.

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So, too, in the case of the adenoid. A relatively small adenoid formation in Rosenmüller's fossa can do much more mischief—to the ears, throat and entire economy—than a much larger hypertrophy in the vault or on the posterior pharyngeal wall, which does not cause obstructive or irritant symptoms. In the absence of the latter I never remove an adenoid from the vault or the posterior wall, but I always see to it that the fossæ are clear. Even slight obstruction of these tracts is fraught with far-reaching consequences. So then, if these premises be true, even in an adult a tonsil or an adenoid, just because it is a tonsil or an adenoid, should not appear to the surgeon as a red rag to a bull.

I doubt if there is a surgeon who will not admit having seen many excellent and permanent results following tonsillotomy; yet, many plead for tonsillectomy as a routine procedure. Do they practice what they preach? If they do they are wrong, for they admit the frequent efficacy of the simpler measure; and if they don't they are wrong again, for then they are misleading those whom they should teach aright. That, at least, is a seemingly reasonable conclusion.

That the tonsil sometimes transmits infection—being the familiar "portal of infection"—we cannot doubt, but that its presence in the highest type of life is undesigned in Nature's scheme of type variation, and its elimination from the complex organism of man immaterial, is at least open to very serious question.

CEREBELLO-PONTILE TUMOR DIAGNOSED FOR SIX YEARS AS TIC DOULOUREUX

THE SYMPTOMS OF IRRITATION OF THE NINTH AND TWELFTH CRANIAL NERVES *

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The diagnosis of tumors in the cerebello-pontile angle or of tic douloureux, as a rule, does not offer much difficulty, but that a tumor of the cerebello-pontile angle should be diagnosed as tic douloureux for six years is somewhat remarkable. In spite of numerous operations, including removal of the ganglion and cutting of the sensory root, the pains persisted and were considered functional. The mistake in the diagnosis was due to the failure of recognition that the pains were the result of irritation of the roots of the glossopharyngeus. The case offered opportunity for physiologic study of the functions of the ninth and twelfth cranial nerves.

REPORT OF CASE

CLINICAL HISTORY

The patient, T., aged 35, a man with negative family and personal history, in 1903 first began to have pain in the right upper teeth, for which he consulted a dentist. A tooth was extracted, but the pain continued, and in a short time every tooth in the right upper jaw was removed. The patient soon complained of pain in the right upper jaw, teeth, nose, eye and forehead, and was admitted to a hospital where five peripheral operations were done in the infra-orbital foramen, but with no beneficial results. In 1907 he first came under my observation, having then had pain for four years and with the above history.

When examined the patient had pain of a sharp shooting character in the right side of the face which began at the angle of the nose, spread to the eye, temple and forehead and also involved the upper jaw; he described the onset as a wave of hot water to the eye and teeth. At that time the pain would come on about every three to five minutes and in his best period every hour. The whole upper jaw was tender and touch on any of the teeth or the roof of the mouth by the patient's tongue, in fact, any irritation over the oral and nasal membrane or over the jaw would produce a spasm of pain. Further examination at this time showed that there was a small area of anesthesia at the site of the old operations underneath the right eye, the patient having a leathery feeling over the rest of his face. Sensation in the mucous membrane of the right nostril was slightly obtunded, but there was no disturbance in the sensation of the tongue, and taste and smell were normal. The motor fifth was intact, the facial nerve showed no disturbance and the tongue was normal. There was, however, palsy of the external and superior rectus and inferior oblique muscles of the right eye, this being supposedly due to the previous operations.

The patient was then again operated on, the inferior dental branch being removed. After this operation for the first time the pain began to run down the right side of the tongue and an attempt was made to remove the Gasserian ganglion. This was done in two stages. The ganglion was exposed and the third division cut, but when traction was made preparatory to its removal the patient suddenly collapsed.

The patient recovered from this operation but the pain persisted and in addition he complained of pain in the eye as of a foreign body and as if his tongue was being burned. After this operation he also had loss of sensation over the inferior maxillary distribution and for a larger area over the infra-orbital region, and loss of taste over the right side of the tongue; he could not close the right eye or wrinkle his brow. The lower part of the face seemed intact. Subsequent to this operation injections of alcohol were made repeatedly over the distribution of the fifth nerve, but while the patient had some benefit for a half hour or an hour, the pain would return.

He was then admitted to another hospital, Feb. 13, 1907, where examination showed a paralysis of the right superior rectus and superior oblique. The form fields, fundus and vision were normal. Smell was normal but taste was lost on the entire right side of the tongue. Sensation to touch and pain was lost in the distribution of the infra-orbital and inferior maxillary divisions of the right side. There was no sensation on the right side of the tongue above and below, or on the oral surface of the right cheek. Deep palpation, however, over the molar prominence and the angle of the jaw elicited pain.

A Gasserian ganglion operation was again attempted and the foramen ovale and rotundum reached and the dura over the ganglion reflected by a small incision. The dura, including the sensory and motor roots, was divided. The ganglion was lifted forward and the third division was found divided at its foramen. The second division was intact and divided. The ganglion was cut away with scissors as nearly entirely as possible, and, as was found post mortem, that part remained which was attached to the ophthalmic division, this branch being intact.

The patient made an excellent surgical recovery and anesthesia was found in the distribution of the right fifth nerve. For two days after the operation the patient did not feel any pain; then he began to complain of pain under the right jaw and right side of throat, which was considered functional. From this time on the pain in the throat and lower jaw was never absent. In a few days the right cornea became injected and beginning ulceration was present. From this time on either the eye was kept closed or he wore a shield, but the moment it was exposed it became red and injected and a keratitis gradually developed. At no time was sight impaired or were there any fundus changes. The patient subsequently became somewhat careless and two years after the ganglion operation, in 1909, the eye was removed.

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* From the Laboratory of Neuropathology, Medico-Chirurgical College; read before the Philadelphia Neurological Society, February, 1910.

Because of the fact that the patient complained of pain in a tooth in the lower jaw it was bored and pulled without pain; also an incision about three inches in length was made along the posterior border of the sternocleidomastoid muscle, and the posterior auricular nerve was isolated and a part of it removed. The lesser occipital nerve was also isolated and injected with alcohol. The patient made a good recovery and for a few days had no pain; then he again began to complain of an unpleasant tickling sensation in the right side of the face near the nose, but his complaints were considered altogether as functional and he was discharged from this hospital.

In a few months he was again admitted to a hospital, then complaining of pain in the face, throat and tongue and a form of paresthesia in the mouth, a sensation as if roaches were climbing through the oral cavity. The right lingual nerve was removed by Thiersch's method, but the identical symptoms were complained of after the operation as before and just as severely. From this time on many alcoholic injections were made into the second and third branches, and also into the seventh nerve, but as before the patient would feel well for a few minutes, the pain then returning just as severely.

About a year after the removal of the ganglion the pain was much worse than it was before the operation; he now complained of sharp stinging pains which started in the back of the right side of the tongue and extended to the right ear and down the right side of the throat, the pain being so severe at times as to extend to the shoulder and cause him to turn his head and neck to the right. These would last for a few minutes and were usually succeeded by a burning sensation in the same parts. He had besides a constant burning feeling in his tongue and throat and sensations as if roaches were crawling over these parts and his throat was constantly dry. Repeated nose and throat examinations never demonstrated any weakness in the action of the palate, pharynx or larynx, but these parts as well as the tongue were excessively tender and touch would always bring on an attack of pain. He could not eat a meal without pain and the act of swallowing always brought it on. Examination for sensation at this time, a year after the ganglion operation, showed typical anesthesia over the face, tongue and inner cheek.

About a year before his death the patient first complained of involuntary movements of his tongue, stating that it would go in a spasm and he had no power to control it. When they came on he had no control over his tongue and he often would open his mouth and watch them in a mirror. They lasted for varying lengths of time but he could always bring them on by a forcible action. They consisted principally in an up-and-down movement; the tip of the tongue would be deviated to the right against the teeth or cheek, would rise up, bend in the middle and then roll over to the right, the movement on the right side of the tongue being much more forcible than that on the left. The tongue was never projected beyond the teeth.

The patient never complained of pain elsewhere or of nausea, vomiting or dizziness; and examination of his left (remaining eye) never showed ophthalmoscopic changes. At times, according to his wife, he did complain of an odd sensation as if he was going to fall and at one time he staggered as if drunk. He never complained of noises in his ear but said that his right ear felt numb. There never were disturbances of hearing. For about a year before his death he also had twitchings in the lower part of his face, the upper part being permanently weak. He had also some weakness of the external rectus muscle but had no diplopia.

He was all this time under treatment, alcohol being injected almost daily into the second and third divisions of the fifth nerve. His pain would cease sometimes as long as twenty-four hours and the twitching in his tongue would also stop. He was operated on again in another hospital but with no results. Finally about a month before his death he left this institution and wandered about the city until he was picked up by the police at 2 o'clock in the morning not knowing where he was. He then became stupid and was unable to tell his name or recognize the members of his family. He walked with an uncertain gait, leaning to the right, and would take no interest in anything but when sitting would stare before him, his body gradually inclining to the right. He could not feed himself, although he would attempt to swallow. Examination showed no evidence of *motor weakness*. The reflexes in both legs were present and equal. He did not complain of pain anywhere for the first time in *six years, but this* was because of his stupidity. From this time until his death in about a month he became progressively more stupid and developed incontinence of urine and feces. His head became slowly rigid, his arms flexed and legs extended, Kernig's sign was present and he showed all the symptoms of a meningitis. It was thought that this was probably purulent and that his whole condition was the result of a purulent infection, inasmuch as the cavity of the right eye was full of pus. Lumbar puncture was negative. He finally died six years after the beginning of his pain.

AUTOPSY

The necropsy was performed by Dr. Joseph McFarland, who found part of the Gasserian ganglion remaining; attached to it was the ophthalmic division. A tumor was found in the right cerebello-pontile angle, lying directly on the sensory and motor root of the fifth nerve. It was round, hard to touch and measured 1⅕ inch in its transverse diameter, ⅞ inch antero-posteriorly and in depth ¾ inch. In its growth it separated the seventh and eighth nerve, the former being flattened out and attached to the anterior basal surface, while the eighth was adherent posteriorly. The sixth nerve grew across the basal part of the tumor. The growth was directly in the cerebello-pontile angle, and compressed the middle cerebellar peduncle, the flocculus and anterior part of the cerebellum and the anterior right side of the pons, making a distinct groove for itself in these structures. In its growth it evidently separated the pons and medulla from the cerebellum, thereby stretching the ninth and tenth roots, which were very prominent. It was, of course, impossible to tell at the necropsy whether the twelfth nerve was stretched. When the brain was removed the right fifth nerve was attached similarly to its fellow. An area of softening was found in the apex and basal portion of the right temporal lobe, which evidently was the result of injury in one *of the Gasserian operations*. The *spinal cord was normal and* there was no meningitis.

Microscopic Examination.—The tumor on microscopic examination was found to be very hemorrhagic, its center being composed entirely of blood-cells and pigment. The outside of the tumor was composed of fibrous tissue and cells whose nuclei were round, oval or spindle-shaped and appeared granular by the acid stains, occupying most of the cell, there being very little protoplasm. The growth was probably sarcomatous.

For the sake of preserving the specimen, no attempt was made to cut the pons below the entrance of the fifth root. Sections of the pons and medulla above the entrance of the fifth root showed no secondary degeneration by the Marchi or Weigert methods. The cells of the mesencephalic root of the fifth nerve were normal. The pia covering the right side of the pons and peduncle, the side of the tumor, and to a less extent anteriorly, was considerably thickened and infiltrated with cells similar in appearance to those of the tumor.

Cranial Nerves.—The left cranial nerves were normal. Of the right, the optic nerve was normal, but the third, fourth, sixth, seventh, eighth and twelfth were slightly degenerated. There was a slight pial infiltration within the pial covering of these nerves, the cells having the appearance of those found within the tumor. The ninth root (for this the anterior fasciculus of the root was taken), was normal. The eleventh nerve was also normal.

The right fifth nerve was cut in various parts. First, that part was taken which was farthest away from the tumor. In this section, both the motor and sensory roots could be seen. In the motor there were found distinct evidences of regeneration, while in the sensory here and there, there were well-defined myelin sheaths and axis cylinders, although most of the sensory root was degenerated. Further sections of the motor and sensory roots showed a similar condition to that already described. It is my intention to discuss the question of regeneration in the sensory root of the fifth nerve in a subsequent communication.

Sections of the spinal cord of all portions stained by the Marchi and Weigert methods showed no secondary degeneration. There was no meningitis.

COMMENT

In the discussion the various factors which render this case important will be taken up in order. First, the question of diagnosis:

It is remarkable that a tumor in the cerebello-pontile angle should for almost six years remain undiagnosed. In the present instance, the tumor, a sarcoma, apparently grew very slowly and seemed to press first on the sensory fifth nerve root, causing the symptoms of tic douloureux. This was the patient's only complaint, at least for the first few years, and when he first came under my observation the case seemed to be a well-marked one of this kind. The patient did present some implication of the sixth and third nerves, but this was thought to be the result of the numerous peripheral operations to which he had been submitted, and no suspicion was entertained of a tumor. After several attempts part of the Gasserian ganglion was removed and the sensory roots cut and the patient seemed to have cessation of pain for two days; then he again complained of pain in the face and in the neck and lower jaw. For this the posterior auricular nerve was isolated and a part removed and the lesser occipital nerve injected with alcohol. Subsequently the right lingual nerve was removed and the patient had innumerable alcoholic injections in the distribution of the fifth, seventh and upper cervical nerves, but with no result. In spite of all these measures the pains persisted, and although they were regarded as functional, after the second ganglion operation I suggested the diagnosis of a cerebello-pontile angle tumor pressing on the fifth nerve; although the pains, which in view of the necropsy, were found to be referable to irritation of the ninth nerve, were never properly diagnosed.

There was perhaps some ground for the thought that the pains were of functional origin. First of all, after the second ganglion operation in which the sensory root was cut and until his death, the patient had the typical disturbances of sensation in the fifth nerve distribution, and in spite of this he complained of pain in these parts. Of the many physicians who saw him—and he was studied in every teaching institution and in most of the hospitals in the city—no one thought that the pains might be due to irritation of the ninth nerve, for it is not generally recognized that the sensory distribution of the fifth and ninth nerves intermingle; and this is the important fact that this case teaches. It is therefore presumable that irritation of either cranial nerve will cause pain to some extent in the distribution of the other.

The symptoms of irritation of the glossopharyngeus or ninth nerve, which were due to the fact that the tumor in its growth pushed outward the right lateral lobe of the cerebellum, in this way stretching the ninth and tenth roots, as can be seen in the illustration (Fig. 1) have not been recorded so far as I am aware, although from my experience in this case I am inclined to believe that they have been overlooked, for this patient had for at least two years the symptoms of such irritation. While both the ninth and tenth nerves were stretched, it is probable that the ninth suffered more, especially as the tumor was in direct contact with the anterior ninth roots and pressed on them to some degree. Because of the possible implication of the vagus, the symptoms referable to the ninth cannot be differentiated as clearly as they might be, although it is justifiable to exclude the tenth nerve, for there never were symptoms present referable to its distribution with the exception of possible implication of the auricular branch which supplies the posterior and inferior part of the external auditory meatus and possibly a portion of the concha and the postero-medial surface of the auricle; and the posterior segment of the tympanic membrane, although this is supposed by some to be in the distribution of the glossopharyngeal. The patient never had difficulty in swallowing or in phonation and repeated throat examinations never demonstrated lesions either in the pharynx or larynx. No disturbances were noticed in the viscera, heart or lungs.

It is important to differentiate the sensory disturbances resulting from lesions of the trigeminus because they intermingle with the sensory disturbances of the ninth. As has been stated, the patient at first had pains only in the parts usually irritated by the fifth. After the first ganglion operation, in which the third or inferior division was cut, there was loss of taste in both the anterior and posterior parts of the tongue. Apparently, then, in this case the glossopharyngeus had no relation to the sense of taste.

After the second ganglion operation in which the posterior roots were also cut the patient had typical loss of sensation in the distribution of the fifth nerve. Figure 2, from a photograph which was made one month after this operation and several days after the excision of the posterior auricular nerve and alcoholic injection into the lesser occipital, shows a typical disturbance of sensation. The inner line of the same photograph shows the area of disturbed sensation one year afterward, displaying the typical regression of sensation which is usually found in such cases; this leaves no doubt at all that the sensory root was cut. The patient had besides loss of taste and of all forms of sensation over the anterior and posterior part of the right side of the tongue and over the oral surface of the right cheek. The assumption, then, is justifiable that all the pains which the patient complained of subsequent to the removal of most of the ganglion were the result of irritation of the ninth nerve.

Whatever doubt there might have been that the pains were the result of irritation of the so-called sensory root of the seventh nerve or the nerve of Wrisberg were removed by the fact that on a number of occasions alcoholic injections were made into the seventh nerve but with no alleviation of pain. Again Mills[1] has proved that the seventh nerve is purely motor and has no sensory functions, contrary to the views of Hunt.[2]

According to Oppenheim[3] the sensory fibers of the ninth nerve go to the pharynx, tonsils and posterior part of the palate, tympanic cavity, Eustachian tube and the posterior part of the tongue, but it is impossible to differentiate the distribution of the ninth because some of the same structures are innervated also by the trigeminus; there is no question, however, that the pharynx is innervated by the ninth nerve. He is in doubt as to whether the taste fibers in the posterior part of the tongue have any relation to the ninth nerve. The motor part supplies part of the muscles of the pharynx without it being definitely established which. Réthi believes that it supplies only the stylopharyngeus; and Kreidl thinks that the esophagus is partially supplied by it. It is also possible that secretory fibers are present which go to the parotid gland. Oppenheim cites an excellent case of paralysis in the distribution of the ninth nerve. The patient, a woman, had loss of taste in the pharynx and posterior part of the tongue and incorrect temperature appreciation in these parts. Especially was it noticed that in breathing and swallowing she had no appreciation of the temperature of the air and water. Objective examination showed a paresis of the palate and pharyngeal muscles, with diminished reflex excitation of these parts, loss of taste in the soft palate, pharynx and posterior part of the tongue, as well as loss of temperature sensation, whereas touch was normal.

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[1] Mills, C. K.: Sensory Functions Attributed to the Seventh Nerve, Jour. Nerv. and Ment. Dis., May, 1910.

[2] Hunt, J. R.: Jour. Nerv. and Ment. Dis., February, 1907.

[3] Oppenheim: Lehrbuch. der Nervenkrankheiten, Ed. 5.

Mills also describes a patient of 24 who one month after she had diptheria began to have difficulty in swallowing with regurgitation of liquids through the nose and an indefinite feeling of numbness on the affected side of the face. She had besides a superficial right facial palsy with a loss of sensation over the chorda tympani area of the tongue and diminished sensation around the Eustachian tube opening. There was also relaxation of the faucial arch and diminution of sensation over the right pillars and right pharyngeal wall. The muscles of adduction were weak in their action and during quiet respiration the right side of the larynx was more relaxed than the left. He attributed the loss of sensation to involvement of the ninth with a possible implication of the tenth and fifth nerves.

In my patient the pains were always on the right side and in the whole course of the disease he never complained of them on the left. They were chiefly localized to the back of the tongue or, as he expressed it, to the "root" and ran down his throat and to his ear. He always complained of a burning feeling in his throat and occasionally of sensations which he likened to the crawling of roaches or flies, of a constant dryness and of a feeling like hot or ice-cold water. He had, besides, sharp, shooting, stinging pains which started in the back of the right side of the tongue and ran to the right ear and down the right side of his throat and, when they were exceptionally severe, to the shoulder. These lasted only for a few minutes, were sometimes agonizing, and nearly always caused him to turn his head and neck to the right. Eating, especially in the last year of his illness, would always cause him pain, and his wife does not remember a single meal that he ate during this time in which he did not have attacks of pain. He did not have difficulty in swallowing and he never choked. The pains while eating were brought on not so much by the chewing as by the contact of the food with the posterior part of his mouth and by swallowing. Occasionally the patient would wake up at night, the pain in the throat being so severe that he felt as if he would choke to death; he felt at times as if the throat were closed. These pains and paresthesias continued to the end.

At no time had he weakness in the motor distribution of the glossopharyngeus. The floor of the mouth was extremely tender, especially in the region of the lingual nerve. The nose, throat and ear were constantly examined and his throat was always found to be excessively tender to touch and there was never loss of the pharyngeal reflexes.

One of the most interesting features of the case were the involuntary movements of the tongue. These appeared about a year before his death and became gradually more severe. They would come on independently, but could be brought on by forcible movement of his tongue. During the spasm he could open or shut his mouth, but could not talk or stop the movement. The movements were principally up and down, or the tip of the tongue would be pushed to the right against the cheek or teeth, or there would be a rising up of the whole tongue with a sort of a rolling, curling movement to the right. In these spasms, while both sides of the tongue acted, the impression was always given to the onlooker that the right side of the tongue was responsible for the movement.

These movements were unquestionably the result of irritation of the roots of the twelfth nerve, and conform somewhat with the results obtained by A. T. Mussen,[4] who found that when he stimulated experimentally the left twelfth root in the medulla the tongue would curl upward and to the right or opposite canine tooth, while stimulation of other fibers caused the tongue to protrude from the angle of the mouth on the same side. He does not state, however, whether he irritated the twelfth root outside the medulla. On stimulation of the left twelfth nerve in the neck there was a strong protrusion of the tongue out of the mouth on the same side. The other reactions were: protrusion of the tip of the tongue strongly to the *right or opposite side and curling up of* the tip, now to the right, at other times to the left. In the present case the movements were always to the side of the irritation and not to the opposite side, and there never was *protrusion of the tongue beyond the teeth.*[4]

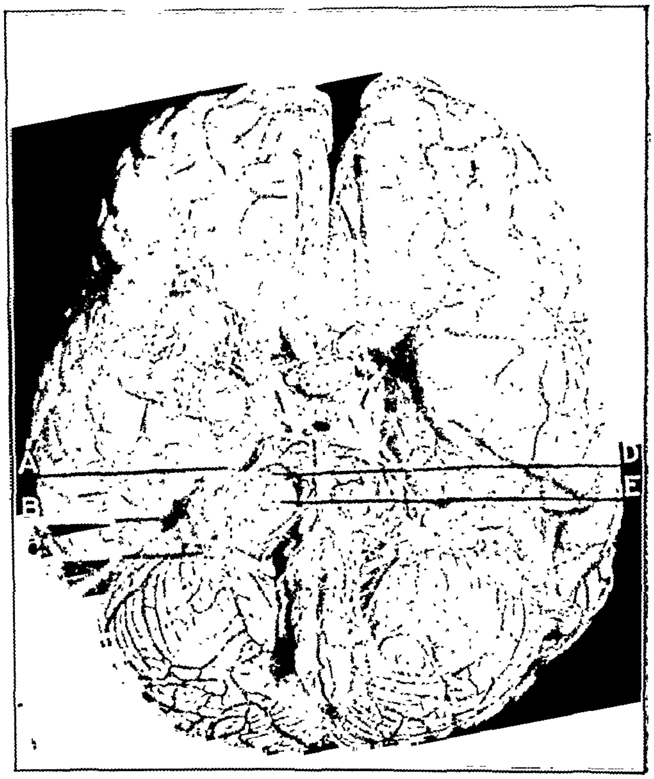

Fig. 1.—Tumor in right cerebello-pontile angle, showing positions of cranial nerves. A, fifth nerve; B, eighth nerve; C, ninth and tenth nerves; D, seventh nerve; E, sixth nerve. Note especially the stretching of the ninth and tenth cranial nerves and pressure on the pons; also, area of softening in apex of right temporal lobe resulting from ganglion operations.

An additional reason that the diagnosis of tumor was not made was the uniform absence of all pressure manifestations while cranial nerve symptoms were not at all commensurate with the pathologic involvement.

The absence of so-called general pressure symptoms of tumor is not, in my experience, unusual and in view of this I have long regarded headache and choked disc as the only reliable pressure symptoms, and even their absence, as this and other cases show, only prove that in the recognition of brain tumor the important factors of diagnosis depend on the specific motor, sensory or special symptoms the result of direct involvement of structures.

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[4] Mussen, A. T.: Brain, 1909, xxxii, 206.

One of the remarkable features of the case was that the tumor, as can be seen in the illustration, pressed on the right anterior part of the pons and made a distinct groove for itself, and yet weakness was never present in the limbs of the opposite side. Microscopically there was no degeneration in the motor fibers either by the Marchi or Weigert methods. It is evident from this that the tumor must have been of slow growth and that the fibers in the pons accommodated themselves to the gradual pressure.

When the patient first came under my observation some of the ocular muscles innervated by the third nerve were paralyzed, which was regarded as the result of some of the previous operations. Microscopic examination, however, demonstrated that there was a cellular infiltration in the pial covering of the right side of the pons and peduncle; this implicated also the third and fourth cranial nerves and no doubt caused the paralysis. A similar condition was found within the fifth, sixth, seventh, eighth and twelfth cranial nerves. Such a condition is very unusual, for in most cases of tumor in the cerebello-pontile angle an accompanying pial infiltration is not present; it further emphasizes the unusual character of this case.

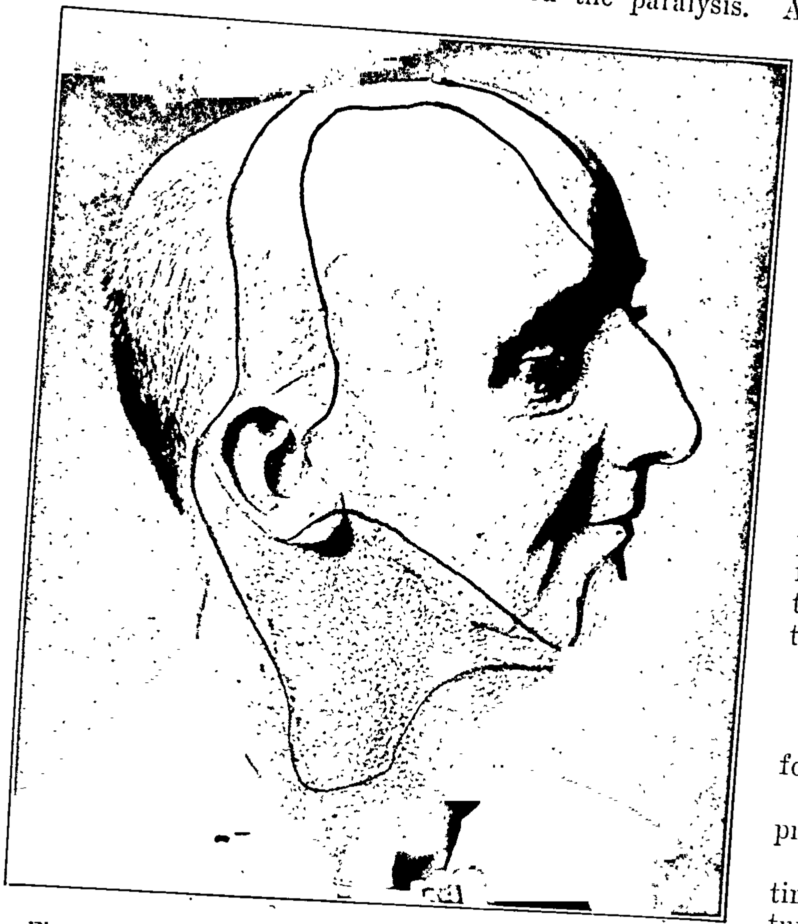

Fig. 2.—Outer line shows area of loss of sensation one month after cutting of sensory root and excision of part of the posterior auricular nerve. Inner line shows area of loss of sensation one year afterward.

The sixth nerve was attached to the growth and must have been pressed on, but diplopia was not present until about five years after the onset of the symptoms, and then only at times. The nerve was partially degenerated.

When the patient first came under my observation, five years after the beginning of the symptoms, there was no paralysis in the facial distribution. After the first ganglion operation the superior branch was cut and for some time he was unable to wrinkle his brow or to close his eyelid. There was some recovery of power, however, but he was never thereafter fully able to close the eye. In the last year of his illness he had involuntary twitching in the middle and lower facial distribution; these were sometimes fibrillary, then again coarse and spasmodic, and were no doubt due to pressure on the seventh nerve, which was attached to the anterior part of the growth and was partially degenerated. Spasm in the distribution of the facial nerve because of pressure is not at all unusual; I have discussed it previously elsewhere.[3]

The eighth nerve was attached to the tumor and was considerably degenerated. Sections showed numerous tumor cells within the nerve, and yet the patient never had loss of hearing and only occasionally complained of some crackling noises in the ear and never had vertigo or disturbance of equilibration. This is unusual, for in tumors of the cerebello-pontile angle one of the first symptoms of pressure on the eighth nerve consists of some forms of tinnitus, later, disturbance of hearing, and, as in nearly all cases the vestibular part of the eighth nerve is also pressed on, vertigo and disturbance of equilibration.

The development of the trophic ulcer in the eye conforms with the generally accepted view that it is only in those forms in which there is an irritation of the ganglion that a trophic condition of the eye appears. It is also interesting that so long as the eye was covered and protected from the air it remained in good condition and that exposure of the cornea brought on a keratitis. This also is in agreement with the conclusion of others.

It was not until about one month before his death that the patient presented cerebellar symptoms. He was then seen by Dr. Ingham, who noticed that when the patient walked there was a drooping of the head to the right, a distinct drooping of the right shoulder and a tendency to reel toward the right. This also agrees with the usual finding in such cases.

CONCLUSIONS

The important points which this case teaches are the following:

1. Tic douloureux may sometimes be the result of pressure on the sensory root of the fifth nerve by tumor.
2. If after removal of most of the ganglion and cutting of the sensory root and evidences of typical disturbance of sensation in the fifth nerve distribution, pains persist, they are not necessarily functional but may be the result of irritation of the ninth nerve.
3. The sensory distribution of the fifth and ninth cranial nerves intermingle and it is possible that in irritation of one the pains be referred to the distribution of the other.
4. The case demonstrates the physiologic symptoms of irritation of the ninth and twelfth cranial nerves.
5. Tumors in the cerebello-pontile angle, or, in fact, in any portion of the brain, may exist without causing any of the so-called general pressure symptoms.

2030 Chestnut Street.

Etiology of Epiphyseal Separation.—Separation of the upper epiphysis of the humerus is usually caused by direct violence, such as a fall on the shoulder. It has also been reported as a birth injury caused by traction on the arm.—J. M. Berry, in *Albany Medical Annals.*

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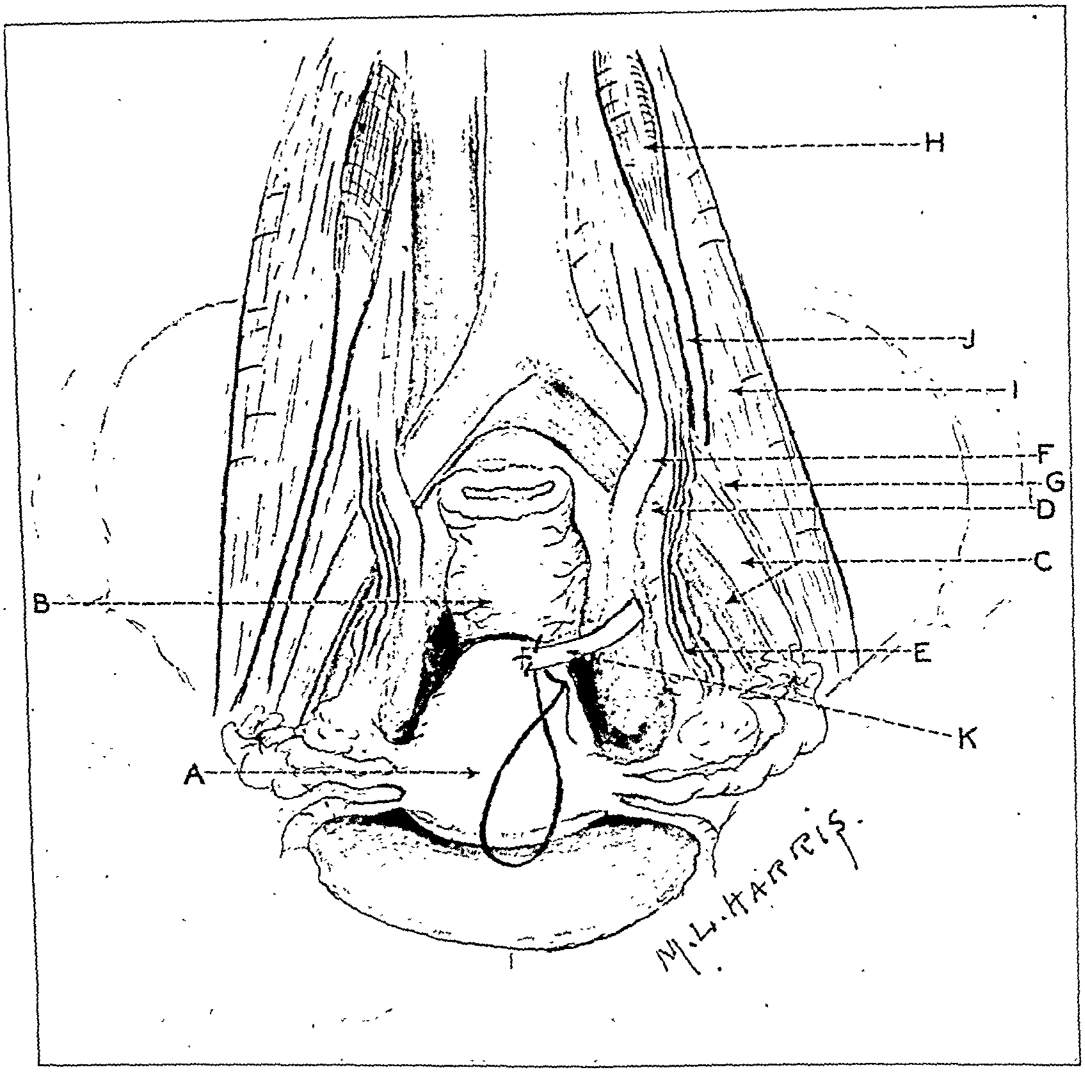
[3] Weisenburg, T. H.: Diagnosis of Tumors and Other Lesions in the Cerebello-Pontile Angle, The Journal A. M. A., April 18, 1908, l, 1251.

A NEW OPERATION FOR PROLAPSE OF THE UTERUS

M. L. HARRIS, M.D.
CHICAGO

This is a preliminary report for the purpose of placing on record a new operation for the cure of prolapsus uteri.

The essential factor in the production of prolapse of the uterus is the recession of the cervix from the hollow of the sacrum. The uterus in its normally anteverted position rests with its anterior surface on the bladder and the vagina, which, in turn, are supported by the muscular floor of the pelvis. The broad ligaments spread out laterally like the wings of an aeroplane while the more or less anteverted position of the uterus is maintained by the round ligaments passing latero-anteriorly from the fundus and the uterosacral ligaments passing from the cervix posteriorly.



New operation for prolapse of uterus. A, uterus drawn sharply forward. B, rectum. C, external iliac artery and vein. D, internal iliac artery. E, infundibulopelvic ligament. F, ureter. G, genitocrural nerve. H, psoas parvus. I, psoas magnus. J, tendon of psoas parvus before passing beneath the genitocrural nerve and the iliac vessels. K, psoas parvus tendon sutured to posterior surface of cervix.

So long as the uterus is maintained in this position prolapse cannot occur. The perineum and pelvic floor may be torn to almost any degree, allowing all the pelvic organs to sag, but so long as the cervix is held upward and backward in its normal position the uterus will not prolapse. On the other hand, if the uterosacral supports are destroyed, allowing the cervix to descend along the vaginal canal, prolapse may occur even in the presence of a good pelvic floor and perineum.

In the usual case of prolapse of any degree from the first to complete procidentia it is found that practically all of the supports of the uterus are more or less altered and hence *no single procedure* will suffice to effect a cure.

In this brief report no attempt will be made to describe the various operations for the repair of the pelvic floor, or for shortening the round ligaments, etc., but attention will be directed to a new operation for holding the cervix upward and backward in the hollow of the sacrum where it normally belongs. Shortening of the uterosacral ligaments is rather unsatisfactory for the reason that in such cases these ligaments have been so elongated and torn as practically to have disappeared, leaving nothing remaining but loose peritoneum.

It occurred to me that the long tendon of the psoas parvus, a muscle of little use in the human subject, might be made to act as a substitute for the uterosacral ligaments and experiments on the cadaver demonstrated the feasibility of the idea.

The operation is performed as follows: The pelvic cavity is exposed from above in the usual manner by a median longitudinal or a Pfannenstiel incision with the patient in the Trendelenburg position.

After packing the intestines well out of the way an incision is made through the peritoneum along the course of the tendon of the psoas parvus, which is readily seen as a distinct white band lying on the psoas magnus. The tendon is followed downward and divided at its point of insertion into the pectineal eminence.

Running along almost parallel with the tendon, but well over to the inner border of the psoas magnus, is seen the genitocrural nerve which should be avoided. The finger is inserted through the incision in the peritoneum and passing subperitoneally raises, by blunt dissection, the external iliac artery and vein from the inner border of the psoas magnus and from the brim of the pelvis so that the finger passes along the lateral wall of the pelvis beneath the external iliac vessels and beneath the infundibulo-pelvic ligament until the end of the finger is felt just beneath the peritoneum in a small free triangular space anterior to the internal iliac vessels and anterior and external to the ureter.

The peritoneum is perforated at this point and a curved forceps followed along with the finger as it is withdrawn.

The end of the tendon is caught with the forceps and drawn down into the pelvis.

The same procedure is repeated on the opposite side.

The ends of the two tendons are now firmly sutured to the posterior surface of the cervix well down, as shown in the illustration, and the incision in the peritoneum closed. The tendon, as will be seen, passes beneath the genitocrural nerve, beneath the external iliac vessels, beneath the infundibulo-pelvic ligament and hence beneath the ovarian vessels and nerves, anterior to the internal iliac vessels and into the pelvic cavity above and to the outer side of the ureter; it is thus impossible for it to exert pressure on any of these structures, however, much it may be drawn on.

As is well known, the psoas parvus is not constantly present in the human subject. Should this muscle be absent the operation may be modified by the use of a portion of the psoas magnus.

This muscle begins to become tendinous along its inner border well up to the bifurcation of the common iliac artery. The incision through the peritoneum is made a little nearer the iliac artery and the vessels are raised from the muscle down to the point where the muscle passes over the pubic bone.

A portion of the aponeurotic or semitendinous inner border of the muscle is then cut across at its lower part and raised up as a ribbon-like band about 1.5 to 2 cm. in width and extending upward to about opposite the bifurcation of the common iliac artery. This band is utilized in the same manner as the tendon of the psoas parvus and the operation completed as described above.

The effect of this operation is to suspend the uterus firmly high up in the pelvis with the cervix held well back where it belongs. The uterus is held by an active muscular support possessing all the natural elasticity and resilience of such structures.

I have performed this operation twice on the living subject.

CASE 1.—M[illegible] ed 29, had a bilateral laceration of the cerv[illegible] ation of the puborectalis muscle with [illegible] hat cervix just [illegible] resented at the vulva [illegible] med April 8, 1910. [illegible] l. On opening the [illegible] absent. The oper[illegible] ion of the psoas magnus as described above. There was no difficulty experienced in carrying out the technic. The round ligaments were then shortened. The patient recovered nicely with the uterus held in normal position.

CASE 2.—Mrs. B., aged 48, mother of 12 children, just passing through menopause, had complete prolapse, the everted vagina and the uterus protruding between the thighs on standing. Operation April 27, 1910. The pelvic floor was repaired in the manner I have described previously in THE JOURNAL, Dec. 9, 1899. On opening the abdomen a good psoas parvus was found and utilized as described above. The round ligaments were then shortened. Anterior colporrhaphy was not done, as it was found that when the cervix was drawn upward and backward where it belonged the cystocele disappeared.

With this operation it is believed that anterior colporrhaphy will be unnecessary in the majority of the cases.

Of course it is too early to show final results in these two cases, but the immediate result of the operation was so satisfactory and the method seems so promising that the operation is described at this time in order that others may try it and its ultimate value thus be determined more quickly.

100 State Street.

TRANSURETHRAL OPERATIONS IN WOMEN

HOWARD A. KELLY, M.D.
BALTIMORE

I believe that the field of transurethral operations through my open cystoscopes is destined in time to become a large one. Given the necessary instruments and a certain amount of skill and precision in using them, there is no reason why a variety of operations should not be done in a simpler manner through the open tube of the cystoscope instead of through a bloody suprapubic or transvaginal incision. It has been my custom from the very first discovery and use of my open-air cystoscope early in the nineties to employ this method in the routine of every-day practice for the treatment of ulcerated areas in the bladder by making repeated direct topical applications to the exposed diseased surfaces just as one would treat an ulcerated sore throat. Of this practice I have both spoken and written on numerous occasions. I have also used the open cystoscope to lift small foreign bodies out of the bladder through its lumen with the aid of suitable forceps. One

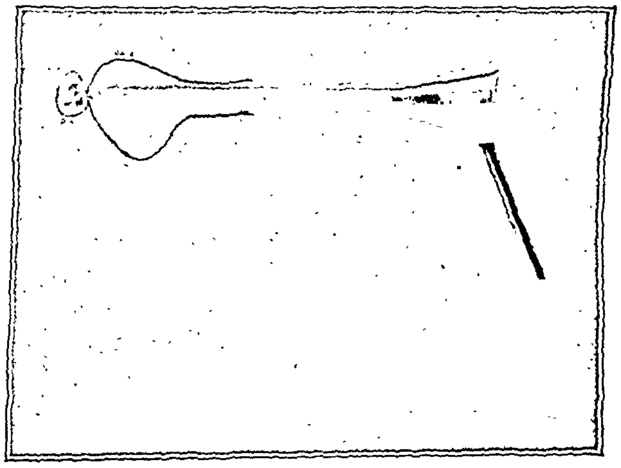


Fig. 1.—Shows the position of the speculum exposing the minute orifice leading into the diverticulum in the posterior wall. A vesical speculum (the actual instrument) reduced to about half natural size rests in a diagrammatic outline representing the urethra and the bladder. The base of the bladder is above, as the patient is presumed to be in the knee-chest posture. Back of the bladder is an outline representing the diverticulum in which the three stones extracted have been inserted.

can also in this way treat papillomata which are not too extensive.

I recently removed several calculi transurethrally by this method from a diverticulum in the bladder and so saved my patient from a cutting operation in the anterior vaginal wall, which she especially dreaded. The extraction of the small stones was effected without any pain whatever, and without using any other anesthetic than a cocain solution injected into the bladder wall, through the speculum as a preliminary.

The operation was done in this wise: the patient, who had suffered from the repeated formation of calculi in the bladder and an accompanying cystitis was being examined in the knee-breast position through my open cystoscope (Fig. 2, No. 1) through the air distended bladder when I remarked the presence of a minute rounded spot on the left posterior (sacral) wall of the bladder, not more than 2 mm. in diameter, with a yellowish center. I had seen this before and had noted a little fluid escaping from it, but took it to be nothing more than a small pocket in the bladder wall, one of the common crypts between somewhat exaggerated trabeculæ. Being intent on making a more careful search on this occasion, however, I was struck by the somewhat peculiar chalky appearance of the center of the opening; a long searcher being introduced (Fig. 2, No. 2) it impinged on something hard and I realized at once that I had to deal with a calculus embedded in a diverticulum, which had been overlooked at every previous examination, both by myself and by others. This interesting find at once offered a full and satisfactory explanation of the recurring calculi and a lingering infection which never would wholly disappear under treatment. An additional aid in the diagnosis would have been found in a wax-tipped searcher or catheter pushed into a hole which must of necessity have been gouged on one side by contact with the stone. At the operation (extraction) I used a No. 10½ cystoscope, though I would ordinarily recommend the use of sizes up to No. 11 or No. 12 or even much larger as giving more room without including any risk of a consecutive incontinence. The first step, after exposing the little opening through the tube of the cystoscope was to thrust a short needle on a long shank (Fig. 2, No. 3), attached to a syringe into the bladder wall by a sudden stabbing movement, penetrating about 2 mm. Through this I injected a few drops of a 1 per cent solution of cocain on three sides of the opening and about 5 or 6 *mm. distant from it.* The injection needle was then laid aside and a long-handled electrocautery knife (Fig. 2, No. 4) introduced with a handle bent at an angle so that I could perfectly see just what I was doing all the time it was in the bladder, when it was heated. The narrow blade was carried into the opening and the current turned on and the margin of the opening burned through in a few seconds in about three places to a depth of from 3 to 5 mm. There was no hemorrhage. This discission opened the pocket sufficiently to expose the calculus and to enable me to grasp it with a pair of toothed alligator forceps (Fig. 2, No. 5). The calculus was soft and broke and was picked out in fragments, when another small calculus was seen looking like a shot about 4 mm. in diameter, which was picked up whole with the alligator forceps and removed. A careful search now revealed the presence of a third calculus embedded in the right wall of the diverticulum; I could just see a limited part of the surface but could not grasp this one with the forceps; so I introduced a blunt, long-handled needle (Fig. 2, No. 6) and worked it around the calculus and peeled back the tissues, until I pried it up out of its bed. I was then able to grasp it too with the forceps and to remove it. The size of the entire diverticulum was now large enough to receive the end of the index finger, not over 1.5 cm. in diameter.

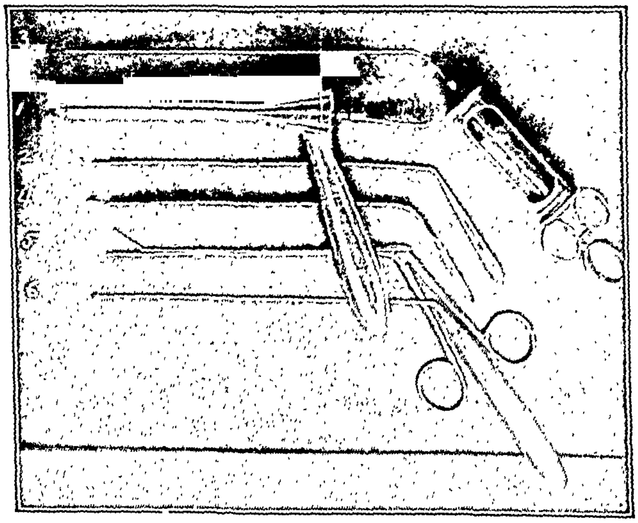


Fig. 2.—*Instruments used in transurethral operation.* 1. Open cystoscope; (2) long searcher; (3) short needle on a long shank attached to a syringe; (4) long-handled electrocautery knife with bent handle; (5) toothed alligator forceps; (6) blunt, long-handled needle.

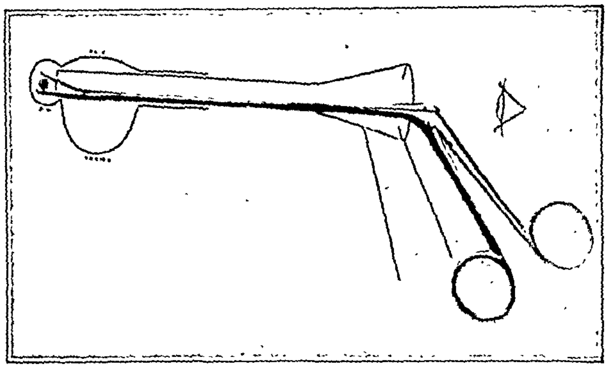


Fig. 3.—The surgeon's eye, the speculum, the urethra, the bladder and the now dilated diverticulum are represented in outline, while the actual alligator forceps used is shown grasping an actual calculus in the act of removing it.

The patient was at once able to move about after the operation and suffered no inconvenience.

I feel sure that it will be possible in the future to treat almost all calculi found in diverticula in this way, that is (1), by exposing the diverticular orifice through an open speculum (2), by cutting the sides so as to open the cul-de-sac with an electro-cautery (3), by extracting the calculi with forceps (4) by examining thoroughly the interior of the cavity through the cystoscope.

This method is applicable to the male as well as to the female bladder.

1418 Eutaw Place.

Roentgen-Ray Treatment.—Some failures to benefit patients suffering with diseases usually amenable to x-radiations may be due to too vigorous treatment, thereby inducing too severe negative phases.—A. F. Holding, in *Albany Medical Annals.*

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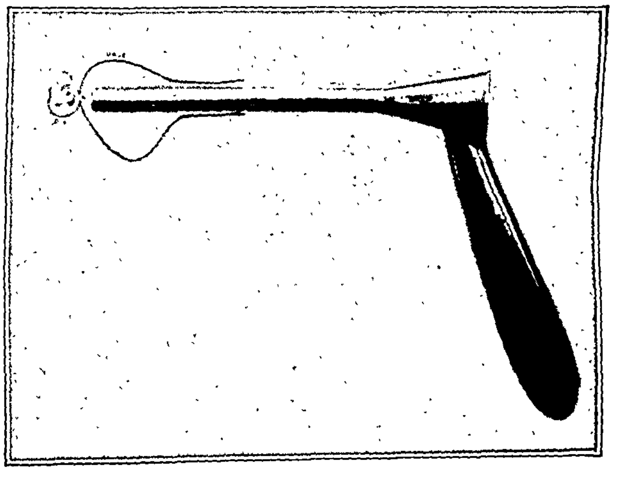

Fig. 1.—Shows the position of the speculum exposing the minute orifice leading into the diverticulum in the posterior wall. A vesical speculum (the actual instrument) reduced to about half natural size rests in a diagrammatic outline representing the urethra and the bladder. The base of the bladder is above, as the patient is presumed to be in the knee-chest posture. Back of the bladder is an outline representing the diverticulum in which the three stones extracted have been inserted.

Palmer studied the histories of 335 patients suffering from cancer of the digestive tract, who presented themselves at our clinic between Jan. 1, 1908 and Sept. 1, 1909, and found the following definite signs of metastasis: (1) implantation carcinoma of the sigmoid, "the rectal shelf of Blumer"; (2) supraclavicular metastasis; (3) carcinomatous involvement of the umbilicus (buttonlike umbilicus); (4) free fluid in the peritoneum. These various conditions, by reason of the metastasis alone, eliminated about 12 per cent. of the total number as hopeless at the time of the primary examination.

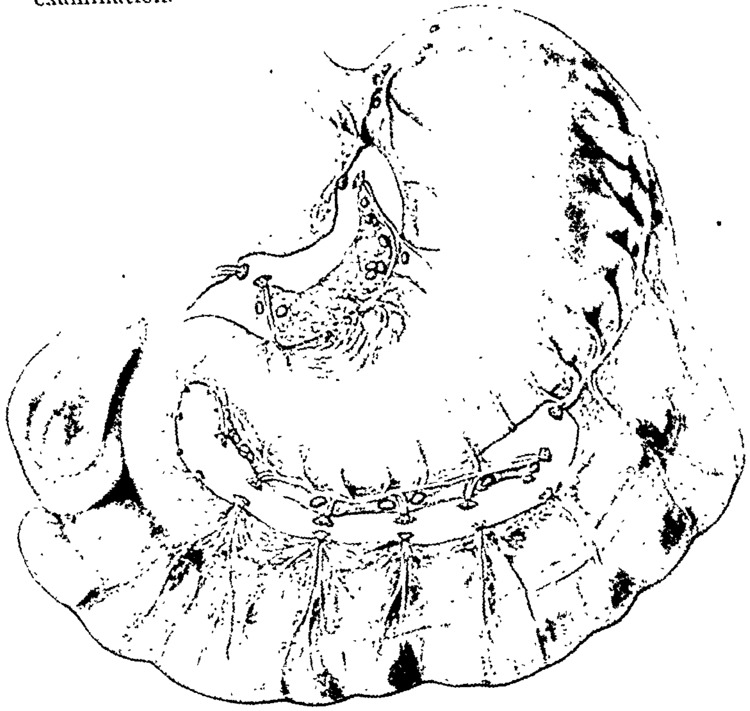

Fig. 2.—Vessels ligated and lymphatic dissection completed.

TABLE 2.—CASES OF CANCER OF THE STOMACH EXAMINED IN THE CLINIC BETWEEN JAN. 1, 1908, AND SEPT. 1, 1909

Total number	335
Hopeless and not admitted to the hospital	146
Resections	78
Gastrojejunostomies	39
Excision malignant ulcer	2
Exploration inoperable disease	70
	335

TECHNIC OF OPERATION

As regards the technic of pylorectomy and partial gastrectomy, I have little to present that is new. An effort should always be made to remove the lymphatic area whether it is diseased or not. The general rule holds good, in the earlier stages at least, that the glandular involvement follows the regular lymphatic routes to the four primary groups of lymphatic glands into which the pyloric end of the stomach drains. We have observed, both in cancer and in ulcer, that when there was glandular involvement of only moderate degree, the evident adenopathy was usually confined to the glandular groups which accompany the four arteries, the superior pyloric, the gastric, the gastroduodenal and gastroepiploic. The lymphatics in this region eventually drain into the celiac and pre-aortic glands but by routes that are far from regular. Wilson and MacCarty, in a study of the lymphatics in a large number of cases in which we had made partial gastrectomy, have found a curious tendency of the disease to pass by certain glands, and have demonstrated that carcinomatous emboli in the early stages do not necessarily involve glands one after another, but may primarily pass into glands at a considerable distance.

Explorations and palliative gastrectomies have given me opportunities to note the glandular involvement in the late stages of the disease. In such cases, due either to unsuspected primary lymphatic connections or obstruction to the regular lymphatic channels causing extension along bypaths, I have seen involvement of the glands in the transverse mesocolon, the glands about the common duct, those along the upper border of the pancreas, and in other situations. It is evident, therefore, that removal of the lymphatic area in gastric cancer is not a simple proposition and it indicates only too clearly that to secure the best results, the disease must be removed before the lymphatics are infected.

Prophylaxis of gastric cancer can be aided by the excision of calloused ulcers of the stomach. In the 266 cases in which we have performed resection, Wilson and MacCarty examined histologically 218, and were able to show that 71 per cent. of the cancers had their origin in chronic gastric ulcer.

We have seen primary cancer of the duodenum in but five cases, and in only one of these did it appear that the cancer might have its origin in previous ulcer of the duodenum. This justifies the belief that gastrojejunostomy is the operation of choice for duodenal ulcer. In two instances, however, we found a gastric cancer which apparently had its origin on the gastric side of a duodenal ulcer which involved the pylorus. For gastric ulcer, the removal of the ulcer itself would seem to be the only safe procedure. We have practiced this for several years wherever it seemed possible and in a number of instances have unexpectedly found cancer on ulcer in the early stage.

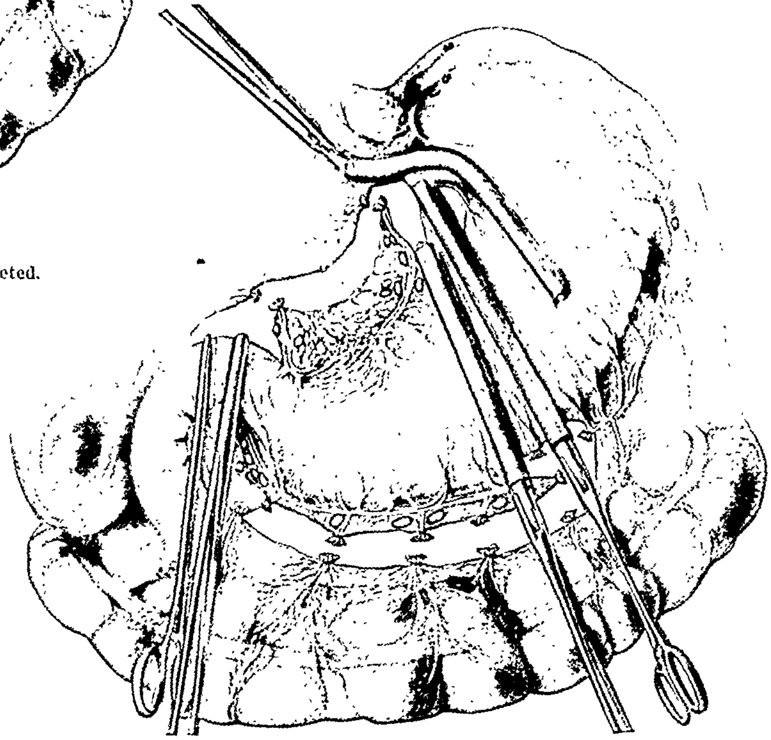

Fig. 3.—Clamps placed on the stomach and duodenum, isolating the pyloric end and lesser curvature.

The fundus of the stomach, like the fundus of other organs as contrasted with the neck, is not largely supplied with lymphatics, and those present lie, to a large extent, in the vicinity of the cardiac orifice. The fundus, from a line about opposite the cardia, passes its lymph-streams upward into the lymphatic glands about the cardia and to the left to the glands lying in the vicinity of the spleen, making a rather sharp lymphatic demarcation between the fundus and the pyloric end of the stomach. This indicates the amount of stomach necessary to be removed in pyloric cancer and makes *pylorectomy* and partial gastrectomy a fairly definite procedure. (Fig. 1).

A typical resection necessitates the removal of all of that part of the stomach lying to the right of a line dropped vertically from the cardiac orifice, although in some cases more of the fundus must be removed on account of direct extension of the disease. It sometimes happens that either the anterior or the posterior wall is more extensively diseased than the other. In this event we have not found it difficult to remove more of the diseased wall of one than the other, and to throw the suture line anterior or posterior as the necessity may indicate.

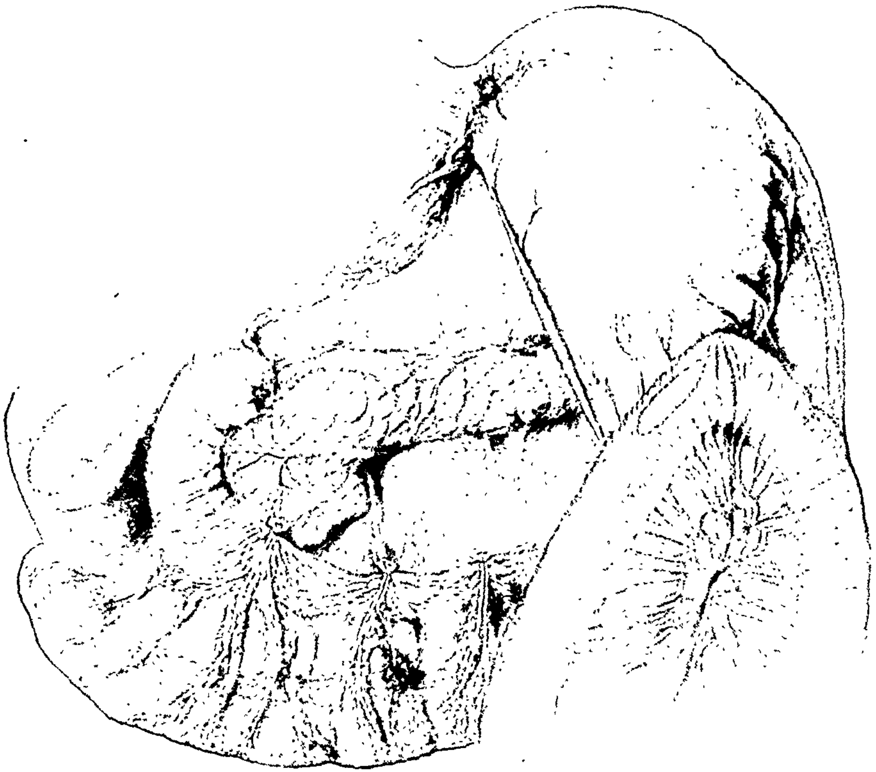

Fig. 4.—Restoration of gastro-intestinal continuity by an anterior gastro-enterostomy, which may be used in place of the posterior operation when the remaining stomach pouch is very small.

Billroth, to whose far-sighted pioneer work in gastric surgery we owe so much, had to contend with shock from loss of blood, which is now obviated by primary ligation of the blood-vessels. From a technical standpoint, the glands and gland-bearing fascia can best be removed at the time the blood-vessels are ligated, and the early ligation of these vessels not only makes the part of the stomach to be removed avascular, but also separates it from its connections so that the succeeding steps in the operation are greatly facilitated.

The blood-vessels are four in number, each accompanied by definite lymphatic channels and glands. These blood-vessels have their origin from the celiac axis, the gastric artery directly from the celiac axis, the superior pyloric and gastroduodenal by way of the hepatic artery, and the left gastro-epiploic from the splenic artery. As a general rule it will be most convenient to make the separation of the superior border of the stomach first, beginning the operation by (a) ligation of the superior pyloric vessel, (b) the gastric, (c) the left gastro-epiploic, (d) the gastro-duodenal vessels. As each vessel is secured, the glandular separation is effected. The procedure is as follows: (Fig. 2).

Step 1.—An opening is made through the gastrohepatic omentum into the lesser cavity of the peritoneum. The superior pyloric artery is isolated at as great a distance as possible from the duodenum and is double-tied and divided between. The terminal branches are dissected upward from the duodenum so that they hang with the glands and fat attached about the pyloric ring. This frees the superior border of the duodenum for an inch and a half or two inches. The glands accompanying the superior pyloric artery are very often involved, and it should be remembered in separating them that the common duct lies in close proximity and may be exposed to injury. In one case I accidentally cut the common duct through three-fourths of its circumference transversely. It was sutured with catgut and a separate drain through a stab wound employed through which there was a biliary discharge for nearly three weeks. On two occasions I found the gall-bladder attached by the fundus to a pyloric growth and it was removed without difficulty as it lay attached. Adhesions to the liver, if present, are separated at this stage of the operation.

Step 2.—The stomach is drawn downward and to the right and the gastric artery is caught at the highest possible point. In thin subjects it may be ligated close to the celiac axis, but in the average case it will be most easily isolated just distal to the large branch which leads up to the esophagus and cardia.

This ligation is usually made from a needle with two independent ties of catgut, as the tissues are liable to retract—and if the ligature slips it is difficult to catch the artery, as I have reason to know. The anterior and posterior gastric branches are caught and tied in such a manner that the fat and glands, and distal part of the vessel can be dissected free from the upper part of the lesser curvature and a space an inch and a half in extent next to the cardiac orifice is exposed. This dissection should be very carefully made, because, as pointed out by Hartman and Mikulicz, it is essential that the whole of the lesser curvature to a point close to the cardiac orifice shall be removed. To a considerable extent the lymphatics lie in the wall of the stomach, and as demonstrated by Cunio, a large majority of pyloric cancers spread upward along the lesser curvature, and the failure to remove involved stomach is most apt to occur in this situation.

Step 3.—Careful examination is now made on the greater curvature for the glands which begin at a point about opposite the cardia. These glands are usually visible even when not diseased. The left gastro-epiploic vessels are caught and double-tied to the left of these glands, and the anterior and posterior gastric vessels caught and tied as they come from the stomach, and the greater curvature cleared for a space of at least an inch and a half. The transverse colon is drawn well into view so that the middle colic artery can be examined at frequent intervals to avoid injury, and the gastro-epiploic vessels tied with the gastrocolic omentum in sections from left to right sufficiently close to the transverse colon to leave the glands lying on the vessels of the greater curvature by a good margin. As this dissection proceeds it will sometimes be found that the avascular area which lies in the circle of the middle colic vessel and the posterior layer of the mesocolic peritoneum is attached to the growth. If this is the case the attached peritoneum can be cut out and removed with the growth. The opening thus made in the transverse mesocolon can be used later through which to make the gastrojejunostomy. As the dissection proceeds to the right the middle colic artery is carefully exposed and traced to its origin in the superior mesenteric artery just at the lower edge of the pancreas, otherwise it may be accidentally injured. Kronlein has shown that in three out of four cases obliteration of the middle colic vessel will lead to gangrene of a portion of the transverse colon and necessitate a coincident resection.

Step 4.—Removal of the inferior gastroduodenal glands which lie below and to the right of the pylorus about the head of the pancreas and in the curve of the duodenum, is the next step in the operation. The gastrocolic omentum is tied in sections rather close to the transverse colon, the fat and glands are lifted up from over the head of the pancreas, and the blood-vessels anastomosing with the branches of the superior pancreatoduodenal artery, are caught and tied. Separation is continued upward, clearing the inferior border of the duodenum for at least two inches until the gastroduodenal artery is reached in the groove between the pancreas head and the duodenum behind the pylorus. Division of these vessels allows raising in one piece all this important group of glands.

Step 5.—The posterior surface of the upper duodenum is separated from the pancreas, and if the pancreas is adherent to the gastric growth, a piece is shaved off, allowing it to remain attached to the growth by adhesions. In other cases it becomes necessary to remove more or less of the pancreatic structure. If the involvement is extensive it is better to leave this part of the operation until the stomach is either cut across and separated from the duodenum, or the line of stomach section on the cardiac side is finished and the stomach turned over in order that this portion of the dissection may be completed under inspection. If such injuries to the pancreas are properly cared for, we have not found that they give rise to serious consequences. Haberkant found that a mortality of 76 per cent., and Mikulicz that a mortality of 74 per cent. followed the removal of such pancreatic involvement. It is the rule that these operations are more serious because more extensive but we have not found any special mortality due to operable pancreatic complication. The best manner of treating such an injury to the pancreas is to cover it as far as practicable with the sheath and posterior peritoneum, and after completely closing the end of the duodenum, if possible, the stump of the duodenum should be buried in the injured surface of the pancreas.

Step 6.—As a rule the duodenum beyond the pylorus is not involved to any considerable extent, but to make sure it is best to remove about an inch of it. A firm compression forceps is placed next to the pylorus and a half inch below this a pair of light holding clamps on the duodenum above and below to prevent this holding clamp from slipping off. The duodenum is divided between and both raw surfaces cauterized with the actual cautery. The pyloric end of the stomach is turned completely over on the left side of the patient. The stump of the duodenum is sutured with a continuous catgut suture passed through the duodenum and around the forceps as in the Pilcher operation for the removal of internal hemorrhoids. The holding clamp is slipped off, the catgut sutures drawn tight and tied. Three-fourths of an inch below this a purse-string suture of medium-sized linen is placed about the duodenum, the ends of the catgut strands are cut short and the duodenal stump invaginated in a manner similar to the stump of an appendix in appendectomy. A second linen purse-string suture is now placed about the duodenum; behind it catches the pancreatic sheath so that the stump may be buried against the head of the pancreas, as recommended by Willy Meyer. Finally the stump of the adjacent tied gastrocolic and gastrohepatic omenta are so adjusted by fine linen sutures as to make further protection. In our experience this technic has been adequate and we have had no cases of duodenal leakage. The field of operation is now searched for any bleeding points and protected with gauze.

Step 7.—The stomach is drawn to the right and holding clamps placed from the space cleared on the greater curvature in Step 3 to the space cleared on the lesser curvature in Step 2. When the stomach is cut across, these clamps sometimes slip near the cardia and the stomach retracts. To prevent this a pair of bayonet holding clamps are placed on the proximal side from above down, grasping the upper part of the stomach half-way across. A clamp is now placed distally to prevent leakage from the end to be amputated and the stomach divided between. The divided proximal gastric surface is cauterized with the actual cautery and the stomach turned in by a continuous chromic catgut suture beginning on the greater curvature. This suture is applied quite tight and is the one we have described on several occasions. It starts on the mucous surface, passes through all the coats to the peritoneum and back on the opposite side through all the coats to the mucous membrane, is then tied and the end cut short. The suture now passes through all the coats from the mucous to the peritoneal coat and begins on the opposite side by passing through all the coats from the peritoneum to the mucous and back on the same side from the mucous to the peritoneum. This is repeated on alternate sides until one-half to two-thirds of the stomach is closed. The cut margins now approach the transverse holding clamp so closely that inversion cannot be accomplished; this clamp is removed and the bayonet clamp, which grasps the upper part of the stomach to the left of the cardia, is depended on during the completion of the suture. A half dozen mattress tension sutures of medium sized linen are now placed, turning in the catgut row, and over this a continuous Cushing suture of fine linen makes all secure (Fig. 3).

Step 8.—Restoration of gastro-intestinal continuity is best made by a posterior suture gastrojejunostomy with the jejunum passing to the left and as short as will permit the intestine to reach the stomach pouch without tension. In some cases the remaining pouch of the stomach is so small that anterior gastrojejunostomy on an 18-inch loop, the jejunum running to the right, can be done more easily and quickly, and has given equally good results (Fig. 4).

In doing the anterior gastrojejunostomy we have usually followed the method of Hartmann, i. e. the two-row suture method but in addition, as Hartmann recommended stitching the intestine to the stomach pouch an inch above the proximal side with a mattress suture. A second mattress suture is placed three fourths of an inch on the distal side attaching the jejunum to the tip of the stomach pouch. This prevents the jejunum from kinking on the gastrojejunal opening. Some operators make the gastrojejunostomy as the first step of the resection. We have done so on a few occasions. It is the rule, generally, that cancerous disease should be removed regardless of consequences and the repair made to fit the individual case. The gastrojejunostomy, if made primarily, may not always be at just the right point after the eradication of the disease. In selected cases the Kocher method of joining the duodenum to the stomach, can be used, inserting the cut end of the duodenum into the posterior wall of the closed pouch of the stomach. We have used the Kocher method but generally speaking, it is not as satisfactory as the Billroth No. 2 method, i. e. closing both the end of the duodenum and stomach and making an independent gastrojejunostomy. The Billroth No. 1 method, direct union between the cut end of the duodenum and gastric pouch, cannot often be used in malignant disease, although for benign disease, especially hour-glass ulcer, transverse resection in continuity and direct suture, give excellent results.

Some eminent surgeons believe that in serious cases we should do the gastrojejunostomy at one time, and after the patient has had an opportunity to pick up as the result of better feeding, to resect the stomach. We have followed this plan on two occasions, making the resection about two weeks after the gastrojejunostomy. In advanced disease gastrojejunostomy seems to be nearly as dangerous an operation as complete resection and because of the sloughing masses in the stomach, gastrojejunostomy does not furnish the rapid relief which is desired. Again, when the patient has recovered from his first operation he is inclined to procrastinate, or to refuse a second operation.

In regard to the question of shock in these debilitated individuals: The patient is given a moderate dose of morphin preliminary to anesthesia, which should be maintained to the very lightest degree during the visceral stage of the operation, as no pain is experienced at that time. As a rule the operation can be completed in from forty-five minutes to an hour and ten minutes, unless some complication arises. After operation the patient is kept warm and is put in the semi-sitting posture. If much debilitated he is given ten to fifteen minims of camphorated oil hypodermatically every four hours for several days. From four to six quarts of saline solution are given the first twenty-four hours by the Murphy method of rectal infusion. Two nutrient enemas are given in twenty-four hours for the first three or four days, by which time the patient will be able to take a sufficient amount of liquid nourishment by mouth. A moderate amount of hot water is allowed in the stomach from the start if borne well; after the first twenty-four hours, tea, broths, etc. may be given. Occasionally some blood and gastric secretion will accumulate in the stomach pouch in the first two days. This should be gently removed with a tube and the stomach irrigated with hot water.

OPERATIVE MORTALITY OF PYLORECTOMY AND PARTIAL GASTRECTOMY

In the 266 resections up to Jan. 27, 1910, there were thirty-four deaths or 12.4 per cent. During the year 1909 there were forty-six resections with four deaths, 8.6 per cent. mortality. This includes every case dying in the hospital without regard to the length of time following operation, and it includes all the early cases in which the mortality was high. In a way this is hardly fair to the statistics as many of the patients were in wretched physical condition at the time of operation, and some of these lingered along for weeks, dying eventually from exhaustion. The post-mortem showed the operative field to be in good condition. Yet this method of estimating the operative mortality seems to be the only way in which unprejudiced statistics can be compiled. If one begins to eliminate certain cases it is difficult to tell just where the line may be drawn fairly. While the operation is one of considerable magnitude if the patient is in good condition, the mortality is certainly under 5 per cent, and to a great extent the deaths are due to the patient's condition rather than to the operation itself. This brings up the question whether resection in advanced cases is worth the risk. I think it is. It should be borne in mind that these patients are usually admitted to the hospital with obstruction of such degree that the possibility of life is reduced to a few days or weeks. Gastrojejunostomy, with nearly the same mortality as resection in cancer, does not give great relief in these advanced cases owing to the discharges from the sloughing mass which pass downward into the intestinal tract and cause *serious changes in metabolism*, as contrasted with the patient's condition after resection of the cancerous stomach.

TABLE 3.—OPERATIONS FOR CANCER OF THE STOMACH FROM APRIL 21, 1897, to JAN. 27, 1910

ST. MARY'S HOSPITAL RECORDS

Total number	627
Explorations—Hopeless condition	206
Gastrojejunostomies	169
Gastrostomies	26
Excision of ulcer (with cancerous change)	2
Resection for cancer	224
	627

I am greatly indebted to Dr. J. F. Robinson for his painstaking care in ascertaining the present condition of patients, and for his aid in compiling the statistics.

STRYCHNIN POISONING

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The patient in question is a young student of pharmacy, aged 21. For a few days previous to taking the drug in mistake he had felt tired and unable to pursue his studies with comfort, which led him to take strychnine sulphate gr. 1/60 three times daily. That very evening he felt what he diagnosed as an attack of coryza coming on, for which he decided to take a coryza pill coated with chocolate. By mistake he took from 2 bottles a number of chocolate-coated pills, each containing grains 1/30 of strychnin sulphate, and took them singly at short intervals until he had taken sixteen in less than three hours. He came to the hospital to consult a physician concerning his peculiar twitching of the muscles around the mouth. While talking with one of the physicians, who noticed the peculiar spasms and who suspected strychnin poisoning, he said, "I have been taking a number of coryza pills." It was then found that the pills taken contained strychnin sulphate grains 1/30.

The patient was at once given two cups of hot black coffee and before lavage could be resorted to he developed severe spasms and almost complete locking of the respiratory muscles. He became cyanosed, opisthotonos followed and there was no time to be lost in saving his life. Chloroform was administered by inhalation until he was completely relaxed, after which a stomach-tube was passed and the stomach washed out with strong coffee. After the effects of chloroform had passed off, it was soon noticed that his face was drawn in the characteristic sardonic grin. The lower jaw became immovable, the neck rigid, the pupils dilated, the reflexes heightened so that the muscles contracted spasmodically. The patient was conscious and complained of pain, especially of the extensor muscles of the body. The administration of chloroform by inhalation again gave him relief. Also a suppository containing the following:

	gm.	
Extracti cannabis indicæ Extracti hyoscyami, āā	015	gr. ¼
Camphoræ monobromatæ	30	gr. v

At the end of three hours he remained thoroughly relaxed and voided 8 ounces of urine. He drank water freely; 30 grains of potassium bromid were given by mouth and a pint of strong coffee injected into the bowel.

The patient in twenty-four hours later had entire suppression of urine. He was catheterized and not half an ounce of urine could be obtained.

The diuretic employed was hot water. The patient was requested to drink constantly all the hot water possible. He drank two quarts and a pint in three hours' time and at the end of four hours he had voided at intervals 16 ounces of urine. The first urine showed albumin and hyaline casts. The albumin and casts, however, disappeared in two days' time. At the end of four days the patient left the hospital in a very good condition.

Acute strychnin poisoning often results in albuminuria and nephritis. The use of strychnin in curing the alcoholic habit is bad therapeutics. In many institutions for the cure of inebriates strychnin is employed too freely. It is true that it suppresses the desire for alcohol but in most alcoholics there is a chronic nephritis and the ingestion of the constant and large amount of strychnin produces an irritant effect on the kidneys, thus increasing the nephritis.

The diagnosis of strychnin poisoning is not always quite as easy as it was in this case. A patient from whom it would be impossible to ascertain any information may be found in convulsions and a careful differential diagnosis must be made in order to treat the patient successfully. The convulsions do not resemble those occurring during the epileptic paroxysm, because they are always tonic and never clonic in character.

They may be distinguished from those of tetanus by the history of the case and by the symptoms. In tetanus the muscles of the lower jaw are first attacked; locked jaw exists for some time before the other muscles are involved. Moreover, in tetanus the muscles do not entirely relax; some remain rigid, whereas in strychnin poisoning all the muscles are affected almost simultaneously, the body being thrown into opisthotonos with each paroxysm. In what is known as tetany, the muscles about the neck usually are not affected, but there is persistent rigidity of other muscles. In hysterical convulsions the muscular contractions are not painful, and the patient does not retain full sensation or full consciousness, but is in a dreamy or stupid condition. In convulsions of hydrophobia the patient is semidelirious there are no tonic spasms of the muscles or cramps and there is a history of a wound from an animal.

1805 Walnut Street.

TRANSFUSION AS A CURE FOR MELENA NEONATORUM

WITH REPORT OF A CASE

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NEW YORK

The following case is the third one of its kind to be reported. The results of transfusion in this instance were as gratifying and as completely successful in bringing about a prompt and entire cessation of the hitherto uncontrollable hemorrhages of melena neonatorum as in the patients of Samuel W. Lambert[1] and of Swain, Jackson and Murphy.[2]

Until the present time all the therapeutic measures tried in the treatment of melena neonatorum have had one characteristic in common, that is, their futility. Whether we have drawn on our scanty physiologic knowledge of the factors influencing the clotting of the blood and have supplied calcium salts, various serums, etc., or whether we have acted on the theory that the disease is an inherited taint from the parents and have resorted to antiluetic drugs, or whether symptomatic treatment has been employed—saline infusions, styptics, lavage, rectal irrigation, etc.—the result has in the majority of cases been fatal. The procedure of transfusion of blood certainly puts a new aspect on the prognosis of this disease.

In this, the third, trial of transfusion an immediate and permanent cessation of hemorrhages was brought about and no harm resulted either to the donor or to the recipient of the transfused blood. In all three cases the growth of the babies subsequently proceeded in a normal way and except for a scar they seemed none the worse for their experience.

The inadequacy of all other measures as compared with transfusion is a strong argument in favor of its more extensive trial whenever recourse may be had to the skilled surgery necessary to perform this delicate operation. With three cures along similar lines on record, the contention that the disease ceased spontaneously could hardly be made and we cannot doubt that the cures were directly due to transfusion. If the future should show that transfusion is not efficacious in curing every case of melena neonatorum, the value of the procedure need therefore not be disputed, for this might simply point to a multiple etiology for this disease. In the instances thus far reported the cause of the persistent hemorrhages evidently lay in the abnormal clotting quality of the blood, which, on being replaced by normal blood, at once clotted normally and a cure resulted. It is, however, not beyond the range of possibility that the cause of some cases of melena neonatorum must be sought elsewhere than in the blood; for instance in abnormally pervious capillaries and blood-vessels. Just so not every glycosuria is a sign of insufficient internal secretion of the pancreas, but some may be the result of brain tumor, excessive ingestion of carbohydrates, etc. Hence if in some case the expedient of transfusion should fail, its value should not be underestimated but its suitability admitted when applied as a definite remedy to cure a definite condition: inability of the blood to clot in a normal manner. All instances of melena neonatorum may fall in this category. If this be true—and the cases thus far reported certainly point that way—we have in transfusion an absolutely certain cure for this otherwise generally fatal malady. At present therefore transfusion is indicated in every instance of the disease, as it is the only method of cure known.

In the case reported here the operation involved was a peculiarly difficult one, as the patient was very small, weighing but 5 pounds and 2 ounces on the third day after birth. Dr. Alexis Carrel of the Rockefeller Institute, assisted by Dr. Adrian Lambert and Dr. R. D. McClure, performed transfusion by end-to-end anastomosis of the baby's femoral vein to the radial artery of the child's father, according to the method devised by Dr. Carrel himself. A great difficulty presented itself in the small caliber of the vein of such a diminutive infant; at first this obstacle seemed insurmountable, but as the urgency of the operation became every minute more apparent, the attempt was made, and at the very first trial the blood flowed freely from father to child, so that the color of the latter changed within a few minutes from a waxy pallor to a marked blood-red. Transfusion by any of the cannula methods was out of the question with vessels of this size.

The history of the case is as follows: Both parents are healthy and there is no record of melena neonatorum, hemophilia or other blood disease in the family and no history of lues or its results. The child, a boy, was born after an uneventful, normal, eight-hour labor on Jan. 14, 1909. Judging from the date of the last menstrual period, labor occurred about two weeks ahead of time, as was also indicated by the small size of the child, which weighed only 5 pounds and 2 ounces on the third day after birth. Primary respirations were spontaneous; the cord was not about the neck; there were no abnormalities. Until the third day the child took the breast at intervals without trouble; urine and stools were normal. On the third day, five hours after nursing, the child vomited blood and a few minutes later passed a bloody stool; the vomiting was not repeated but the bloody stools continued until eight hours later when the infant was almost exsanguinated, as shown by its very marked pallor; the pulse was weak, beating 180 to the minute; the only other signs of bleeding were found in a hemorrhagic area covering the left half of the hard palate, and punctate hemorrhages in the remainder of the hard and soft palate. Transfusion was performed; the child's color changed to normal and except for one additional bloody stool, which evidently was contained within the intestine at the time of the transfusion, there was no further occurrence of hemorrhage; the baby nursed well and gained weight rapidly; up to the present time, one year since the birth of the child, there has been no recurrence of the bleeding.

327 Amsterdam Avenue.

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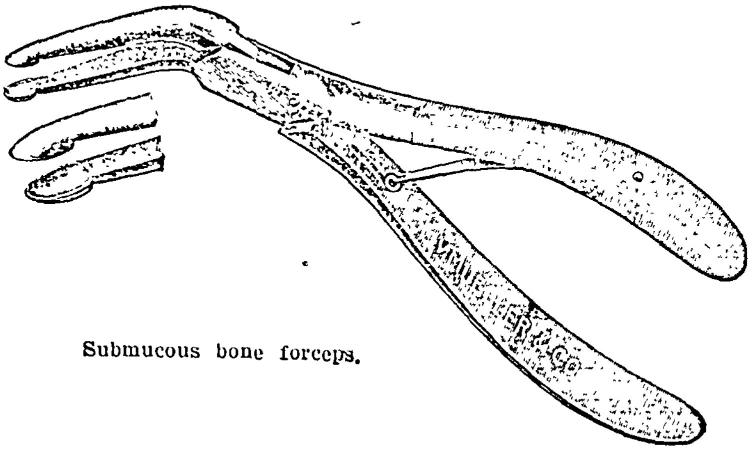
[1] Lambert: Medical Rec., 1908, lxxiii, 885.

[2] Swain, Jackson, and Murphy: Boston Med. and Surg. Jour., 1909, clxi, 407.

ANTERIOR SUBMUCOUS BONE FORCEPS

W. SOHIER BRYANT, M.D.
NEW YORK

The most important use of this convenient-sized rongeur, and the use for which it was especially designed, is the removal of the maxillary ridge in the submucous septal operation. The blades are small enough to allow their easy guidance in the operation, and, at the same time, strong enough to cut the hardest bone. The rongeur is most efficient also for removing the bridge between the cavum tympani and the mastoid antrum in the tympano-mastoid exenteration. In cleaning up the operative field in a mastoid exenteration the instrument is useful, as it will readily cut any bony tubercule or irregularity.



Submucous bone forceps.

41 East Thirty-third Street.

A RAPID STAIN FOR FROZEN SECTIONS*

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CHICAGO

The use of frozen sections as an aid to surgical diagnosis has a well-defined field of usefulness. At the present time the method is employed mainly in selected cases in which a rapid microscopic diagnosis is needed to determine the extent of operative procedure. With the introduction of simple freezing apparatus, however, frozen sections may well enter a field of more general usefulness. Very little apparatus is required, and carbon-dioxid tanks can be procured at almost any cross-roads, facts which should appeal to those surgeons who desire to see the results of their operations and yet have not the facilities required for histologic technic.

The staining methods in use at present are numerous. Perhaps the most satisfactory are the hematoxylin-eosin method and the polychrome methylene-blue method of Wilson.[1] Hematoxylin-eosin gives the clearest-cut histologic picture, but the time consumed is too long when one considers that the patient is under anesthesia while the tissue is being studied. The Wilson method also gives a good differential stain, is simple, and cuts down the time considerably. The staining method offered below is simpler than either of these, requires no solutions other than the stain and takes less time. The histologic pictures are clear and well differentiated, and so far in no case in which the tissue has taken the hematoxylin-eosin has our stain failed.

The stain is easily made. A saturated solution of pure thionin (Grübler) in water is allowed to stand a few hours and then filtered. Equal parts of the filtrate and 2 per cent. phenol are mixed, and the stain is ready for use. The addition of the phenol is not necessary, but by its use the stain is preserved, and its power of differentiating improves with age. The polychrome is made evident by the nuclei taking on a definite blue color, while the cytoplasm and all connective tissue has a distinct red or purplish tint. In a long series of cases of varied nature studied by this stain the diagnosis made of the frozen section has been verified by more detailed celloidin or paraffin sections.

The general method for frozen sections now employed in this laboratory is as follows: The specimen is put into 10 per cent. formalin in the operating-room and immediately sent to the laboratory. Formalin is not necessary to the success of the stain but is used in preference to other solutions because even this short sojourn considerably facilitates the cutting of thin sections. A selected piece of the tissue about 5 to 10 mm. square by 2 to 4 mm. thick is placed directly from the formalin into water on the freezing microtome and frozen by means of carbon-dioxid spray. The cut sections are spread from the knife-edge into the dish of water and immediately lifted to a slide, a drop of the stain added and the cover-slip put on. The excess water may be removed by gentle pressure over the cover-slip with a piece of filter-paper, and the slide is ready for study.

Therapeutics

ERGOT

Belief and disbelief still run hand in hand as to the value of ergot for any therapeutic use, except as a uterine contractor. Those who have faithfully tried without prejudice, and many of those who have faithfully tried with prejudices, ergot in proper solution, intramuscularly, have become convinced of its value as a vasocontractor and as a circulatory bracer. Also, those who have thus properly tried ergot in cerebral and spinal congestions, have become convinced of its ability to better the condition. Many men who have tried ergot for these purposes in absolutely hopeless, fatal cases, as a last resort, and I am sorry to say many even then by the mouth, have condemned it as inefficient and futile medication.

Why ergot should have been so grossly misused for so many years as a proper medicament in internal and hidden hemorrhage, one cannot understand, while at the same time it is so completely condemned without proper trial by some practitioners as a circulatory aid and as a remover of cerebral congestion. While digitalis, strychnin, atropin, suprarenal and ergot may occasionally, by strengthening the general circulation, stop an internal hemorrhage, theoretically, they would generally do harm by raising the blood pressure, and practically their success is doubtless generally *post hoc* and not *propter hoc*. In other words, the hemorrhage had ceased or was about to cease by normal clotting before the drug had had time to act. Lowering of the blood pressure by nitroglycerin or some other method is the only logical way of stopping internal hemorrhage, unless such hemorrhage is venous and is due to a dilated heart.

Dr. Alfred T. Livingston (*Medical Record*, Jan. 29, 1910) says: "Of all the organs of the body the heart is probably the most irrationally and outrageously treated by the profession to-day." This is absolutely and positively true. It is not a question, in the various kinds of heart failure, acute or subacute, sudden or gradual, occurring in acute or in chronic disease, of what has been done for this heart by the physician in charge, but what has not been done. Too many drugs, too large doses and too frequent would generally be the verdict of anyone who calmly noted what the failing circulation of the patient had suffered. Often, in the same patient, vasoconstrictors and vasodilators are intermingled in a most unique and heterogeneous manner. The vasoconstrictors, which are the stronger, always prevail. This is sometimes fortunate and sometimes unfortunate for the individual. It is rare that the physician notes the character of the heart's action, the force of the apex beat, the force of the valvular closures, especially the aortic, counts the heart beat and the pulse rate at the wrist to see if they agree (recently a symptom chart was found recording a pulse of about 70 on repeated examinations, while the stethoscope disclosed a beat, at one and the same time, of 140), or carefully notes the blood-pressure, even with his finger, to say nothing of the valuable knowledge furnished by a pocket blood-pressure instrument.

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* From the Laboratory of Pathology, Michael Reese Hospital.

[1] Wilson, L. B.: A Method for the Rapid Preparation of Fresh Tissues for the Microscope, The Journal, Dec. 2, 1905, xlv, 1737.

There is no question that the frequency of cardiac disturbance is on the increase. There is also no question that the heart requires the most thoughtful care during acute illness, especially in patients over thirty. It is not the province of this article to discuss the reasons for this, but it is a fact. Sad to relate, it is impossible to decide dogmatically or even theoretically, with a given heart, arteries, disease, and signs and symptoms, exactly what, in a particular individual, it is best to do to improve this particular circulation. It can be positively declared that alcohol is not a stimulant when the circulation is failing. It can be equally positively declared that alcohol often, by dilating the peripheral blood vessels, modifies and improves the circulation. It can be positively declared that, with a high tension and throbbing pulse, nitroglycerin is more valuable than alcohol. It can be positively declared that too much strychnin is used in circulatory failure. The dose should rarely be more than 1/40 of a grain hypodermatically, and this not too frequent, and ordinarily 1/30 once in six hours, hypodermatically, ought to be the outside strychnin limit. Under its excessive stimulation the heart cannot dilate properly, does not get its proper nutrition from its normal diastole, and it soon is worn out by its abnormal activity. Again, digitalis will rarely slow a rapid heart during illness, and probably should never be used if there has been a prolonged fever, as the probability of some myocarditis may be assumed.

When there are passive congestions of the lungs or edema of the lungs, or when there is sudden acute congestion (not pneumonia) in valvular disease of the heart, or in failing heart during pneumonia, ergot given intramuscularly is valuable usually, and even occasionally life saving. Ergot by the mouth does not seem to have the ability to strengthen the circulation. The blood-pressure may be raised, in young people, from depression to a tension that may require nitroglycerin in considerable doses. On the other hand, as certified to by Livingston, ergot does not always raise the blood pressure, and especially does not seem to in older individuals. A high, bounding pulse, due to cerebral irritation, as in delirium tremens, will many times become soft, from the quieting effect that ergot has on the brain. Frequently cerebral edema or "wet brain" is strikingly improved and life often saved by the proper administration of ergot.

It is not claimed that ergot will cure cerebrospinal meningitis, or that ergot can render the need of an antitoxin less, or that ergot can prevent the necessity of lumbar puncture, but ergot may postpone the necessity for lumbar puncture, may prevent the repeated necessity for lumbar puncture, and may aid a cerebrospinal patient to recover. Often ergot has been used in cerebral inflammation due to the pneumococcus which is almost hopeless, or in that due to tuberculosis which is also hopeless, or when there is abscess of some portion of the brain, and the negative results obtained have caused ergot not to be used in diseases of better prognosis.

To repeat, ergot is of value in the meningitis of typhoid fever, pneumonia, rheumatism, cerebrospinal fever, and la grippe. It is also of value in delirium tremens and the cerebral excitation of a post alcoholic debauch. Some kinds of congestive headaches are markedly helped by ergot.

The dose of an aseptic ergot is from 1 to 2 c.c. (15 to 30 minims), given deeply into the deltoid muscle, in acute heart failure, once in 3 hours for 2 to 3 times, and then once in 6 hours. By such administration apparently moribund patients with valvular disease have revived and lived, and are still alive, and this after all the ordinary cardiac and circulatory tonics had been administered without causing improvement. In cardiac weakness it seems to be unwise to continue the administration of ergot longer than through the emergency; other drugs then become more valuable, *i. e.*, after the symptoms as above described are ameliorated the ergot should be stopped. In acute inflammation like cerebrospinal meningitis the ergot should be administered once in 6 hours or once in 12 hours, depending on the amount of cerebral congestion, the coma, and the condition of the circulation.

The value of ergot after operation to promote peristalis when the intestines are apparently paralyzed is doubtful; sometimes it is wonderfully successful in correcting this condition, and at other times it fails. It certainly can never do any harm, and should be tried.

This is also attested by Dr. Livingston in the above mentioned article, viz.: "I desire to put on record the statement that I cannot conscientiously say that I have recognized any ill effects from my use of this drug given hypodermatically and most certainly have seen nothing suggestive of the so greatly apprehended and dreaded ergotism."

Protection Against Claims for Malpractice.—The Netherlands national medical association has recently organized a special committee with consultant legal authority to study means to protect physicians against unjustified suits for malpractice. The committee has also the task of watching over proposed legislation so that the interests of the medical profession can be regarded in the new bills. The occurrence which led to the organization of the committee was a suit brought against a physician because he had insufflated into a patient's eye a powder which he supposed was calomel, as his order called for chloretum hydrargyrosum, while in reality the druggist had dispensed mercuric chlorid, chloretum hydrargyricum. The sight of the eye was lost and, as the druggist had no means, the physician was sued and compelled to pay damages, although the highest authorities testified that he was in no way to blame. The plaintiff claimed that he should have tested the powder received from the druggist.

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SATURDAY, MAY 14, 1910

THE PATHOLOGY OF RABIES

Rabies presents many puzzling problems besides that of its specific cause, for the entire behavior of the infection is in many ways quite different from that of other infectious diseases. The incubation period is unique both in its extremes of variability, from 14 days to as many months, and in the great length usually exhibited, from 8 to 12 weeks; the excessively long incubation periods reported in some cases with good authority, of from 12 to 38 months, are entirely without parallel in any other acute infectious disorder.

Another striking peculiarity recently emphasized by Paltauf[1] is that whereas only a relatively small proportion of persons bitten by rabid animals develop the disease, yet once the disease does fully develop the termination is inevitably death, for there is no satisfactorily authenticated report of a recovery from fully developed rabies in man, although recovery has been observed in dogs.

According to the most reliable figures it would seem that rabies develops in less than 10 per cent. of all persons bitten by rabid dogs and not receiving prophylactic treatment, Paltauf placing the figures at 6 to 9 per cent. When we consider that such highly contagious diseases as smallpox, plague, etc., have a considerable proportion of recoveries, it is indeed strange that the incidence of rabies is so low when its mortality is 100 per cent. If less than one-tenth of those inoculated with the virus develop the disease at all, why should not many of the infected tenth recover from it? Even in laboratory and domestic animals infection follows natural inoculation in only about one-half of the cases, with a mortality of practically 100 per cent.

Also in the process of protective inoculation is a remarkable condition in that a living virus is injected without infection ever having been known to occur, although the Pasteur treatment has been applied in over 100,000 cases. Evidently the rabbit-passage virus is altogether incapable of infecting man, although it can certainly infect other animals.

Paltauf has made an important observation concerning the pathology of this mysterious disease, through his rare opportunity of securing autopsies on four persons who died during the period of treatment, from some intercurrent disease (one cerebral apoplexy, one pulmonary embolism, two delirium tremens). In all four cases it was found that the medulla, when emulsionized and injected subdurally, infected rabbits with rabies, showing the presence of active virus in the patients' nervous tissue; but apparently this virus was in an attenuated condition, since the incubation period in the inoculated rabbits was unusually long and the symptomatology that of the chronic or "consumptive" rabies.

As but one person in about ten of those bitten develops rabies, Paltauf assumes that his four consecutive positive findings do not represent latent infection which would have manifested itself had the patients lived longer. He believes that these observations indicate that persons bitten by rabid animals commonly have the virus reach the central nervous system, but that nine times in ten it is there destroyed, without causing symptoms, by the natural defensive mechanism which may be made more effective by the immunizing process of the Pasteur treatment; in other words, rabies-inoculated men usually develop a latent infection which is overcome without the symptoms of rabies appearing. The medulla of three persons who died without rabies shortly after the completion of a course of Pasteur treatment, was found to be non-infectious for rabbits, indicating that the virus is destroyed under the influence of the immunization.

Presumably the virulence of the virus with which the individual is inoculated is a chief factor in deciding whether it will be overcome or not, for we find that the bites of rabid wolves cause rabies in about 60 per cent. of those bitten, as against from 6 to 9 per cent. of fatalities from dog bites, and none from subcutaneous inoculation of attenuated rabbit virus. Possibly the failure of destruction of the virus may depend in other cases on individual lack of immunizing power, and sometimes on local disturbances in the central nervous system, since the literature abounds with records of cases in which either physical or psychic shock seemed to determine the development of rabies. In any case, the observations of Paltauf throw a new light on rabies pathology, by indicating that even those who do not show evidences of rabies after being bitten by a mad dog may harbor the virus in their brain tissue for some time, and gradually attenuate and finally destroy it.

The "*virus fixe*" of rabbits is probably a form of rabies virus which is especially readily destroyed by man, and the rabicidal substances developed in reaction to it may help in the destruction of the more virulent virus which entered the body with the bite. This power of the human organism to destroy rabies virus is similar to that exhibited by animals that are not highly susceptible to rabies, such as monkeys and fowls; but the rabicidal power is higher in man than in these animals, since they can destroy the virus only after several passages.

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[1] Paltauf, R.: Wien. klin. Wchnschr., 1909, xxii, 1023

BEING SUPPLANTED

Life has tests of all kinds, and no one can tell in what way one may be tried out next. A physician often finds himself in a position demanding great skill and resourcefulness in professional ability; and again, in other circumstances, it is not his knowledge and skill but his character that is put to the test, as, for instance, when he is superseded by another physician. Perhaps he has made a most thorough examination of the patient and study of the history, has decided on a diagnosis and has instituted treatment which is just beginning to have its effect. The obscure ailment of long standing is about to yield to the skilful treatment, when the patient, grown weary of the necessary delay, abandons his first attendant and consults another physician who thus happens to have the case in hand when the symptoms clear up, and the first physician receives no credit, but, on the contrary, blame.

In another case, perhaps, the disease is one which does not yield to treatment. The patient is not content to be told that palliation is the only hope, and the physician who has done his best, or even the best that science can do, is thrust aside for someone else. The implied disparagement may be the harder to endure because of the patient's turning to one of the quacks who fatten on incurables or to some "patent medicine" or to one of the sects of mind-healing. It is no light task for a physician to accept the matter in a cheerful frame of mind and to refrain from bitter words that he may afterward regret.

When Abraham Lincoln was named for the presidency he supplanted another statesman, who, by training and experience, was qualified for the position. Similarly, Garfield entered the presidential ranks as a dark horse, stepping ahead of Sherman, whose attainments and valuable services seemed to point him out for the nomination.

It is worth while to compare the different attitudes assumed by these two men. Sherman became a disappointed man who seemed unable to forget having been pushed aside, while William H. Seward cheerfully entered the service of the great Lincoln who had supplanted him, and by faithful service as secretary of state made for himself a name honored by his nation and untarnished by any personal grudge.

The physician who can accept an undeserved slight without angry words and without hasty slurs on a brother physician has in him the spirit which will win the love of a community, and which will reward him in the long run. Not only this, but he has discarded unprofitable and bitter brooding over trouble that cannot be prevented, and has left his mind free for the joys of life and the pursuit of his profession with cheerfulness and satisfaction. As has been well said, we cannot prevent the evil birds of discontent and resentment from flying past our doors, but we can prevent them from building their nests in our homes.

BORIC ACID AS A FOOD PRESERVATIVE

For some years past a strenuous campaign has been conducted by the concern which practically controls the borax supply in this country, with the object of removing the very natural objection which the public has to the use of borax and boron compounds as food preservatives. The arguments for and against the use of these chemicals in foodstuffs have invariably centered about the question of their effect on the human system. That boron compounds would inhibit the growth of bacteria in meat has been tacitly assumed by both their champions and opponents, the point of dispute being the harmfulness of the chemicals *per se*. It now seems that it is by no means certain that boric acid, in the proportions usually used, will inhibit the growth of the most dangerous bacteria.

In view of the light which it throws on this question, an article on "A New Aspect of the Effects of Boric Acid as a Food Preservative," in a recent issue of the *British Medical Journal* and abstracted in this issue,[1] will prove of interest. In this article, Julius Bernstein, pathologist to the city of Westminster, details the results of a series of experiments which he carried out to determine the effect of boric acid as a preservative of meat. Summed up, the results demonstrated that while boric acid, used in the strength of three-tenths of one per cent., inhibits to some extent the growth of *all* organisms, the inhibition is most marked in the case of the yeasts and harmless saprophytes. On the other hand, it had much less effect on the growth of the *Bacillus typhosus* and the *Bacillus enteritidis* (Gaertner's bacillus). In other words, while the objective putrefactive changes which are checked, are such as would by their odors give warning against the growth of bacteria, the organisms which are of the greatest danger to human beings, the bacillus of typhoid and the bacillus of "meat poisoning," are affected but little, if at all. From a practical standpoint these results mean much. As Bernstein's experiments indicate, the addition of boric acid to stale meat, or even to meat that has begun to decompose, makes it possible to market such meat by preventing and to some extent removing the warning signs of decomposition, i. e., offensive odor and taste; in a word, the chemical masks the symptoms of putrefaction. The growth of dangerous bacteria, however, not only is not inhibited by boric acid—except to a very slight degree—but, as the prolific and rapidly growing harmless bacteria are prevented from growing, the amount of soil (meat) left for the nourishment of the former is proportionately much greater. Meat that has not been treated with boron compounds or other chemicals, will, before it becomes a serious menace to health, give warning by the odor and taste developed by the growth of the bacteria of putrefaction; with meat that has been "preserved" with boric acid the development of such warning signs is prevented.

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[1] Page 1654, abstract 21.

DR. HODENPYL—A TRUE SCIENTIST

In the death of Dr. Eugene Hodenpyl, the medical profession has lost a great man and a rare spirit. To die at the age of forty-six, when ready to enter the door which one has opened to a great discovery, is one of the tragedies of life. To have succumbed to pneumonia, because he was too worn with work to rally, places Dr. Hodenpyl in the ranks of the martyrs of science.

Until a few years previous to his death, Dr. Hodenpyl had been associated with Columbia College as pathologist, but during the last few years his work was done at Roosevelt Hospital. The laboratory of the latter institution may gain no little credit from having been the scene of Dr. Hodenpyl's successful experiments on the relief and possibly the cure of cancer.

His one modest preliminary communication[1] on "Treatment of Carcinoma with the Body Fluids of a Recovered Case," was all that the medical world at large knew of his experiments. So determined was he that his work should not be heralded as the discovery of a new cure for cancer and nothing published until amply proved, that few know how much has really been accomplished. Judging from analogy and from his success in the cases on which he has been working, the few who were permitted to know the result of his experiments felt that he had the key to the solution of the problem in his hands, and that his conception and experiments placed him in the rank of the leaders of medical thought.

A biologic laboratory is perhaps the sternest school of integrity and honor. The fame that comes to a devotee of pure science is unsought, and cannot even be expressed in eulogies. It is expressed in the belief and following of the whole medical profession, and of the intelligent of all nations. Possessing the quality of the true scientist, Dr. Hodenpyl disregarded what might seem to many to be his duty to himself, his patients, and his family, to use the precious limited quantity of ascitic fluid he had obtained to relieve as many as possible of the patients brought to him, and, incidentally to achieve sufficient wealth to enable him to pursue his researches with as much freedom as though he were in an endowed laboratory. His higher conception of his duty as a scientist, and of the possibilities of his discovery made him throw his very life into the testing and proving of every step of his methods, and into the search for a possible source of general supply of this fluid, which is at present limited to the tappings of his one patient. It demanded more than fortitude for Dr. Hodenpyl to resist the importunate pleadings of sufferers in every part of the land, and to reserve the fluid for those patients whose treatment could contribute to knowledge on the subject, and for trusted experimenters, who could carry on the various correlated series of chemical and biologic investigations that were under way when he died.

Not only for his ability and for the untimely interruption of his work is he mourned, but for his character and lofty ideals, for such men are the inspiration of those who, desiring to search after truth, are tempted to bow low to Mammon.

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[1] Medical Record, Feb. 26, 1910.

Medical News

ALABAMA

Commencements.—The commencement exercises of the Medical Department of the University of Alabama, Mobile, were held April 18, when a class of 39 received diplomas. Irwin Craighead, LL.D., delivered the oration to the graduates on "Civic Duty of the Medical Man from the Layman's Point of View." The degrees were conferred by President John W. Abercrombie.——At the fifteenth annual commencement exercises of Birmingham Medical College, held April 28, a class of 28 was graduated. The commencement address was delivered by President A. P. Montague of Howard College, and Dr. Russell M. Cunningham, Ensley, delivered the charge to the graduates. The diplomas were presented by Dr. Benjamin L. Wyman, dean of the college.

CALIFORNIA

Personal.—Dr. Julius Rosenstirn, San Francisco, has returned from Europe.——Drs. Fitch C. E. Mattison, Pasadena, and Charles C. Browning, Monrovia, have been appointed members of the executive committee of the California Public Health League.——Dr. Joseph E. Artigues has been appointed physician and Drs. Michael H. Etcheverry and Paul Campicke have been elected visiting physicians of the French Hospital, San Francisco.——Drs. E. W. Parsons, Lewis C. Jacobs and Thomas H. O'Connor have been appointed assistant emergency service physicians of San Francisco.——Dr. Frank E. Blaisdell, San Francisco, has been appointed assistant professor of anatomy in Stanford University.——Dr. Attilio S. Musante, Sacramento, has been reelected president of the Alumni Association of the University of California College of Pharmacy.

ILLINOIS

Policy of New Hospital Superintendent.—Dr. Sidney D. Wilgus assumed charge of the Elgin State Hospital May 1. He announces his policy of segregating acute and chronic cases of patients, and the extension of the plan of inmate labor as fast as possible.

Diploma Mill Unearthed.—The State Board of Health reports that it has unearthed a rank "diploma mill" in Chicago, and has succeeded, through a physician in another state, in purchasing three diplomas. Prompt action will be taken to cause the revocation of the charter and also to summon those implicated, two of whom are recent licentiates of the board, to show reason why their certificates should not be revoked for unprofessional and unlawful conduct.

State Bacteriologic Laboratory at Danville.—The Illinois State Board of Health will have a bacteriologic laboratory on North street, Danville, directly opposite the place of meeting of the Illinois State Medical Society, May 17-19, for the purpose of affording information to physicians who desire to ascertain what is being done at the laboratory at Springfield. The routine examinations of the board will be conducted in this laboratory during the days of the meeting, and those wishing specimens examined are requested to bring them to Danville.

Personal.—Dr. Frank P. Norbury has severed his relations with Maplewood Sanatorium, Jacksonville.——Dr. William H. C. Smith, Godfrey, while en route to Springfield, May 2, was struck in the cheek by a hatpin and received a very painful wound, narrowly escaping injuring the eye.——At the annual meeting of the medical staff of Proctor Hospital, Peoria, May 2, the following officers were elected: Dr. Robert A. Kerr, president; Dr. Robert A. Hanna, vice-president; and secretary, Dr. William R. Allison.——Dr. Eugen Cohn has reported for duty as assistant superintendent of South Bartonville State Hospital.——Dr. Everett H. Bradway has been elected a member of the board of health of Abingdon.——Dr. Henry B. Hemenway, Evanston, has the sympathy of his friends on account of the recent death of his wife.

Chicago

Personal.—Dr. and Mrs. George S. Isham and son have started for Europe.——Dr. Buell S. Rogers has returned from an extensive tour of the gulf states and Cuba greatly improved in health.

Hospital Items.—The new wings of the Wesley Hospital, recently completed at a cost of $136,000, was formally opened May 7. The new wing is six stories in height and will increase the capacity of the hospital one-fourth.——The plan to convert the Mary Thompson Hospital for Women and Children into a contagious disease hospital is said to have caused a controversy among the officials. A majority of the board of trustees is believed to favor the change, while women physicians on the board of managers protest against any deviation from the plan of the endowers of the hospital.——An emergency room for the care of the sick and injured has been installed in the cell-room of the South Chicago Police Station.——Dr. Albert J. Ochsner has sold the Chicago Fresh Air Hospital for Tuberculosis 20 acres of land in West Ridge on Western avenue, north of Kenilworth, for $5,000, with the assumption of $15,000 incumbrance. The ground will be used mostly for park purposes, but also as the site for additional buildings as needed.

IOWA

Personal.—Dr. Frank E. Boyd, Colfax, has been elected local surgeon for the Rock Island System; also for the Colfax, Northern and Spring City Railroad.——Dr. Charles M. Linehan has been appointed city physician of Dubuque.——Dr. Thomas J. Williams has been reelected health officer of Hiteman.——Dr. Elijah W. Jay, Marshalltown, coroner of Marshall county, underwent operation for hernia, April 25.——Dr. Edward J. Wehman has been appointed city physician, health officer and bacteriologist of Burlington.——Dr. Benjamin E. Eversmeyer has been reelected health officer of Muscatine.——Dr. George S. Roepke, Aurelia, is reported to be seriously ill.——Dr. George W. May has been appointed health officer of Cascade.——Dr. Charles A. Katherman has succeeded Dr. Milton Daily as police surgeon of Sioux City.

KENTUCKY

Antituberculosis Societies.—The Paducah Association for the Study and Cure and Prevention of Tuberculosis has been incorporated without capital stock by H. C. Rhodes, R. Rudy, Dr. Harry P. Sights and A. R. Meyers.——The Kentucky Association for the Study and Prevention of Tuberculosis has engaged as field secretary Eugene Kerner of New York City. His duty will be to gather information with regard to the tuberculosis situation in Kentucky, to prepare a state tuberculosis exhibit, and to organize local antituberculosis associations wherever possible.

Personal.—Dr. J. Thomas Wallingford has been elected health officer and Dr. Hugo W. Aufenwasser a member of the board of health of Covington.——Dr. Eugene C. Roemele, Frankfort, has started for Germany.——Dr. George W. Armes, Leitchfield, has succeeded Dr. Daniel J. Healey as superintendent of the Institute for the Feeble-Minded, Frankfort.——Dr. William F. Gardner, Dycusburg, who was seriously injured in the machinery in an accident in a motor boat, is reported to be in a serious condition at Riverside Hospital, Paducah.——Dr. John W. Pendley, Paducah, has been elected physician of McCracken county.

LOUISIANA

Students' Research Club.—The student body of Tulane University has organized a research society to be known as the Undergraduate Medical Research Club of Tulane University, Louisiana, with the prime object of individual investigation into the history and treatment of those diseases which now occupy the attention of medical science.

Personal.—Dr. Oscar Dowling, Shreveport, has been elected surgeon in charge of the ear, nose and throat department of the Eye, Ear, Nose and Throat Hospital, New Orleans, vice Dr. Gordon King, deceased. Dr. Dowling will move to New Orleans.——Dr. W. F. Waide has been appointed resident surgeon of the Eye, Ear, Nose and Throat Hospital, New Orleans.——A store owned by Dr. John W. Lambert, Tangipahoa, was burned April 14.——Dr. Emil Regard, Mansura, has been elected president of the Louisiana School Boards' Association.——Drs. J. Hope Lamb and Henry A. Veazie, New Orleans, have been appointed acting assistant surgeons, U. S. P. H. and M.-H. Service, for duty in the sanitary inspection office.——Dr. Joseph A. Estopinal, medical inspector of the State Board of Health, has resigned, and will return to St. Bernard and engage in general practice.——Dr. Luther Sexton, New Orleans, has donated $10,000 to the Methodist Orphanage, Wesson, Miss.

MARYLAND

Personal.—Dr. Jephtha E. Pitsnogle, Hagerstown, has been reappointed health officer of Washington county.——Dr. Aleck P. Harrison, Baltimore, assistant physician and pathologist at Springfield Hospital for the Insane, Saxeville, has resigned.

Baltimore

Personal.—Dr. Mary Sherwood has been elected president, and Dr. Florence R. Sabin, corresponding secretary, of the Just Government League.——Dr. William Hans Browne has resigned as professor of English literature in Johns Hopkins University on account of advancing age. Dr. Browne was librarian of the university from 1879-1891.——Dr. Howard A. Kelly has been elected treasurer of the Maryland Auxiliary of the Mission to Lepers.——Dr. Clemens Von Pirquet has been granted a year's leave of absence and left for Europe April 30.

Johns Hopkins Alumni Meet.—The annual meeting of Johns Hopkins Medical School Alumni Association was held May 6 and 7. Addresses of welcome were made by Drs. Henry M. Hurd, William H. Howell and William H. Welch. Clinics and demonstrations followed, and a banquet was held on the evening of the second day. Dr. Lewellys F. Barker entertained the alumni at a garden party, and class organizations held separate meetings. Dr. Thomas R. Brown, Baltimore, was elected president, and Dr. Walter R. Steiner, Hartford, Conn., secretary-treasurer, of the association. It was decided to hold a reunion every three years. Dr. William H. Welch addressed the association on "The Historical Significance of Johns Hopkins."

MASSACHUSETTS

Personal.—Dr. L. J. Henderson has been made assistant professor of biologic chemistry, Dr. W. R. Brinckerhoff, assistant professor of pathology, and Dr. L. B. Wolbach, assistant professor of bacteriology in Harvard Medical School.——Edward S. Cowles, Boston, is said to have pleaded guilty, April 27, to one count of an indictment charging him with practicing medicine without due registration, and asked that the minimum fine of $100 be imposed.——Dr. Walter R. Mansfield, Boston, has been elected chairman of the Municipal Board of Bath Commissioners.

Society Meetings.—The annual meeting of the Essex North District Medical Society was held in Lawrence May 4, and the following officers were elected: President, Dr. Warren W. Pillsbury, Newburyport; vice-president and auditor, Dr. William H. Merrill, Lawrence; secretary-treasurer, Dr. J. Forrest Burnham, Lawrence (reelected); corresponding secretary, Dr. Roy V. Baketel, Methuen; censors, Dr. Frank B. Pierce (supervisor), Haverhill; Drs. Robert M. Birmingham and John A. Magee, Lawrence; John A. Fitzhugh, Amesbury, and Arthur C. Nason, Newburyport; councilors, Drs. Frank B. Flanders, Charles G. Carleton, and J. Forrest Burnham, Lawrence; Israel J. Clark, Haverhill; Frank W. Snow and Ernest H. Noyes, Newburyport, and John A. Douglass and Frank E. Sweetsir, Amesbury; commissioner of trials, Dr. John F. Croston, Haverhill; nominating councilor, Dr. Israel J. Clarke, Haverhill, and alternate, Dr. Charles G. Carleton, Lawrence. Resolutions were adopted condemning contract lodge practice. The president of the Massachusetts Medical Society was present as a guest and urged the united support for a bill for a national department of health, and a resolution was adopted "that the principles of Senator Owen's bill for the establishment of a National Health Department under the supervision of a secretary of public health, who shall be a member of the cabinet, are in this society's judgment correct and should be enacted in law."

MICHIGAN

Clinic Week.—The annual clinic week of the Alumni Association of the Detroit College of Medicine will be held May 18-26.

Personal.—Dr. C. Ward Ellis has been elected health officer of Eaton Rapids.——Dr. Emily Summers Stark has been appointed physician to the State Industrial Home for Girls, Adrian.——Dr. Ernest W. Haass has succeeded Dr. Johnson B. Kennedy as president of the Detroit Board of Health.——Dr. Edward J. Kirkwan has been appointed city physician of Ludington.——Dr. Clyde C. Slemons, formerly city bacteriologist of Grand Rapids, has been elected health officer, Dr. Alden H. Williams has been elected bacteriologist, and Dr. Leland H. Gilleland, medical inspector of schools.——Dr. Alvin H. Rockwell has been appointed health officer of Kalamazoo.——The medical friends of Dr. William F. Metcalfe, Detroit, gave a dinner in his honor April 27, at which addresses were made by Dr. Charles G. Jennings and Henry O. Walker. Dr. Metcalfe told of the trip through Europe, taken by himself and Dr. Homer E. Safford, and ideas they had obtained there for the new hospital.——Dr. Charles H. McLean has been appointed health officer of Caro.——At the annual meeting of the Hastings Antituberculosis Society, Dr. Charles H. Russell was elected president.

MINNESOTA

New Medical Buildings.—The work on the three new buildings for the University of Minnesota, the Elliot Memorial Hospital, Millard Hall, and the Institute of Anatomy, has been begun. These three buildings will cost $600,000. The Elliot Memorial Hospital will contain the office of the dean, faculty rooms, record rooms, an amphitheater, and laboratories for the departments of physiology and pharmacology. The Institute of Anatomy will be devoted chiefly to laboratories.

Personal.—Dr. Thomas G. Lee, director of the Institute of Anatomy of the University of Minnesota, has sailed for Europe as delegate to the International Anatomic Congress at Brussels, and the International Zoologic Congress at Graz, Austria.——Dr. George T. Ayres, Ely, who has been ill at Shipman Hospital with scarlet fever, is convalescent and has left the hospital.——Dr. Henry M. Bracken, secretary of the State Board of Health, has been selected to represent that body at the International Congress on School Hygiene in Paris in August.——Dr. Harry A. Tomlinson, superintendent of the State Hospital, St. Peter, has been appointed superintendent of the State Farm for Inebriates near Wilmar.——Dr. Albert F. Groves, Brainerd, who has been ill several weeks, has recovered and resumed practice.——Dr. and Mrs. Christopher Graham, Rochester, have returned from a trip to Italy.

MISSISSIPPI

Personal.—Dr. William W. Reynolds, Meridian, has been appointed surgeon for the Queen and Crescent System with headquarters in New Orleans, as temporary successor to Dr. Oliver H. Harrison, for many years local surgeon of the system in Meridian.——Dr. James McQ. Buchanan has been appointed his own successor as superintendent of the East Mississippi Insane Hospital, Meridian.

Graduating Exercises.—The fourth annual graduating exercises of the Mississippi Medical College, Meridian, were held April 30. Diplomas were presented to a class of 16 by Dr. R. A. Venable. The address to the graduates was delivered by R. E. Williams, and the annual oration by Rev. W. P. Witsell. At a meeting of the faculty of the college, it was unanimously decided to erect a new college building with hospital attached, at a cost of from $20,000 to $30,000.

MISSOURI

Commencement Exercises.—The thirty-third annual commencement exercises of the Ensworth-Central Medical College, St. Joseph, were held May 7, when a class of 17 received diplomas from the hand of Dr. James J. Heddens, president of the board of trustees of the college.

Personal.—Dr. G. Bruce Lemmon has been appointed health commissioner of Springfield.——Dr. Charles E. Krimminger, Independence, has been appointed secretary of the Jackson County Board of Health and physician to the county jail and McCune Home for Boys, and Dr. William G. Rowe, Blue Springs, has been appointed physician to the county farm.——Dr. James T. Stamey has been appointed assistant city physician of St. Joseph.

State Association Meeting.—At the fifty-third annual meeting of the Missouri State Medical Association, held in Hannibal, May 3-5, the following officers were elected: President, Dr. Herman E. Pearse, Kansas City; vice-presidents, Drs. George Homan, St. Louis; Joel Y. Hume, Armstrong; Walter A. Camp, Springfield, and John Ashley, Bloomfield; councilors—second district, Dr. Luther A. Todd, St. Joseph; third district, Dr. G. W. Whiteley, Albany; fourth district, Dr. Samuel Sheldon, Trenton; fifth district, Dr. Edward E. Parrish, Memphis; sixth district, Dr. James Hanks, Brashear; seventh district, Dr. Jacob D. Smith, Shelbina; eleventh district, Dr. Jefferson D. Brummall, Salisbury; twelfth district, Dr. Clarence M. McConkey, Lathrop; seventeenth district, Dr. Samuel G. Kelly, Sedalia; secretary, and editor of the *Journal of the Missouri State Medical Association*, Dr. Edward J. Goodwin, St. Louis; treasurer, Dr. J. Franklin Welch, Salisbury; orator on medicine, Dr. Enoch H. Miller, Liberty; orator on surgery, Dr. Robert M. Funkhouser, St. Louis. Dr. Joseph Grindon, St. Louis, was elected chairman, Dr. William L. Brosius, Gallatin, vice-chairman, and Dr. Charles H. Dixon, Holliday, secretary of the medical section; and Dr. Arthur E. Hertzler, Kansas City, chairman; Dr. W. T. Lindsey, vice-chairman, and Dr. Ernest G. Marks, Kansas City, secretary of the surgical section.

St. Louis

Personal.—Dr. George C. Crandall has succeeded Dr. Ralph L. Thompson as a member of the new board of health.——Dr. Walter C. G. Kirchner, superintendent of the city hospital, and Dr. Cleveland H. Shutt, assistant superintendent, have resigned.

Endowment for University.—Messrs. William K. Bixby, Adolphus Busch, Edward Mallinckrodt and Robert S. Brookings have donated more than $2,000,000 for the medical department of Washington University, and construction of new buildings to cost more than $1,000,000 will begin at once. The following additions to the faculty have been announced: Dr. George Dock, from Tulane University, to direct the department of medicine; Dr. John Howland, from the University and Bellevue Hospital Medical College, professor of pediatrics; Dr. Eugene L. Opie, from Rockefeller Institute for Medical Research, professor of pathology; and Dr. Joseph Erlanger, from the University of Wisconsin, professor of physiology.

NEW YORK

Personal.—Among those nominated as members of the board of managers of the new Mohansic State Hospital by Governor Hughes were Helen M. Gould and Dr. William D. Granger of Bronxville.——Dr. Charles F. Howard of Buffalo recently resigned the presidency of the State Prison Commission and Henry W. Solomon of New York City has been elected in his place.

Urologists Meet.—At the annual meeting of the New York Society of the American Urological Association, April 27, a symposium on "Movable Kidney" was held, which was participated in by members of the society and invited guests from the New England Urological Society. The following officers were elected: Dr. Edward L. Keyes, Jr., New York City, president; Dr. Terry M. Townsend, New York City, vice-president; Dr. G. A. De Santos Saxe, New York City, secretary; Dr. Walter B. Brouner, New York City, treasurer (re-elected), and executive committee, Drs. Clarence R. O'Crowley, Newark, N. J., Victor C. Pedersen, New York City, and Terry M. Townsend, New York City.

New York City

Lecture on Malignant Disease.—Dr. William Seaman Bainbridge gave his annual lecture on Malignant Disease at the out-patient hall of the New York Skin and Cancer Hospital, April 20.

Gifts to Columbia University.—It was announced at the last meeting of the trustees of Columbia University that gifts amounting to more than $60,000 had been received recently. Among these gifts was one of $18,000 from the children of Dr. Abraham DuBois, who was graduated from the College of Physicians and Surgeons in 1835, to be used to establish a research fellowship in the medical department in memory of their father.

Personal.—The council of the New York Academy of Medicine has recommended the election of Dr. Abraham Jacobi to honorary fellowship.——Dr. and Mrs. William Dillon of Brooklyn have sailed for Europe.——Dr. Hans Zinsser, instructor in bacteriology in Columbia University, has been made associate professor of bacteriology in Stanford University, California.——Fire in the residence of Dr. Anthony Bassler, Manhattan, caused damage to the extent of $5,000.——Dr. Russell-Burton Opitz has been appointed associate professor of physiology in Columbia University.

Buffalo

Personal.—The latest reports regarding the condition of Dr. Roswell Park, Buffalo, who is ill in the New York Hospital with pneumonia, are favorable.——Dr. George J. Haller, Buffalo, was injured recently while cranking his automobile.

Hospital Notes.—The commission recently appointed by the mayor of Buffalo to inquire into the hospital conditions of the city, severely criticizes the administration of the Erie County Hospital and recommends that it be purged of politics, and that instead of being administered by the superintendent of the almshouse under the direction of a board of supervisors, a commission be appointed by the mayor, two members being named by the county judge.——A joint committee has been appointed consisting of three members each of the Buffalo Board of Aldermen and the Board of Councilmen with the idea of breaking the deadlock as to the selection for a site for a municipal hospital for contagious diseases.——The German Hospital, Buffalo, has acquired two additional lots.——The German Deaconess Hospital, Buffalo, is raising $100,000 for an addition to the institution.

PENNSYLVANIA

Employment for Cured Consumptives.—The Philadelphia Jewish Sanatorium for Consumptives, Eaglesville, has solved the problem of finding suitable and lucrative employment for the cured consumptive. The managers offer to assist discharged patients in finding work and suggest that they move to the country, telling them that if they will start truck farms, poultry farms or dairy farms, the sanatorium will buy all of their products.

Jefferson Alumni at St. Louis.—The arrangements for the meeting of Jefferson Medical College alumni during the session of the American Medical Association at St. Louis have been placed in the hands of Dr. August P. Munsch, Bright Building, Kingshighway and Page Avenue, who calls attention to the fact of the meeting and requests that each one intending to be present at the gathering send name and two dollars to him, that he may be able to estimate the number to be present and make suitable arrangements for them. Cards of admission, stating the time and place of the meeting, will be addressed to all those who respond, in care of the postoffice of the American Medical Association at General Headquarters.

Philadelphia

Retiring Professor Honored.—Three hundred physicians of this and other cities gave a banquet on May 5 in honor of Dr. James Tyson, on his retirement from the professorship of medicine in the University of Pennsylvania and presented him with a large silver loving cup. Dr. W. W. Keen presided and among the speakers were Dr. Frank Billings, Chicago; Dr. Reginald H. Fitz, Harvard University; Dr. George A. Piersol, University of Pennsylvania medical faculty, and John Wanamaker.

Smallpox Liner in Port.—The North German Lloyd steamship *Main* from Bremen passed the inspection of quarantine and immigrant officials, arrived in this city and the immigrant passengers were on their way to Baltimore when the discovery was made that two immigrants, who had been landed at the government quarantine at Reedy Island, supposed to have chickenpox, had in reality smallpox. A telegraph message stopped the train near Baltimore and brought it back to Philadelphia for vaccination of the passengers. The *Main* brought 2,410 passengers into port, 45 of whom were cabin passengers.

Personal.—Dr. Leo Loeb has resigned as assistant professor of experimental pathology in the University of Pennsylvania to become director of the pathologic department of the St. Louis Skin and Cancer Hospital, on September 1, this year. Dr. Moyer S. Fleisher, Overbrook, accompanies Dr. Loeb as his assistant.——Dr. John M. Swan, associate professor of clinical medicine in the Medico-Chirurgical College, has resigned and will become medical director of Glen Springs Sanatorium, Seneca Lake, N. Y.——Drs. John Sibbald, Fox Chase, James Sibbald and George Holland have sailed for Europe.——The trustees of the University of Pennsylvania have elected the following members of the teaching staff of the medical department: Dr. Richard M. Pearce, professor of experimental medicine; Dr. Alonzo E. Taylor, professor of physiologic chemistry, and Dr. Paul A. Lewis, assistant professor of pathology.

Phipps Institute Plans Work.—Plans have been adopted for the conduct of the Phipps Institute, now a department of the University of Pennsylvania, and a most comprehensive campaign for the prevention and cure of tuberculosis will be undertaken. The scope of the work to be performed was evolved after weeks of labor by a committee of physicians, comprising John H. Musser, David L. Edsall, Alexander C. Abbott and Charles H. Frazier. As soon as possible the new building will be erected at Seventh and Lombard Streets, the site first bought by Henry Phipps, and architects are now at work on the plans and specifications. In accordance with the desire of Mr. Phipps, it will be the most complete hospital for the treatment of consumptive patients in the United States. The trustees have elected the following men to direct the work of the institution: Director of the laboratory, Dr. Paul Lewis; director of the clinical department, Dr. Henry R. M. Landis; and director of the sociologic department, Alexander Wilson, who will be superintendent of the institute and with the director of the laboratory will devote all his time to the work. The laboratory is to be fitted for the most exacting scientific research and included in the program of the sociologic department mapped out by Mr. Wilson and adopted by the committee and trustees are the following:

Make an effort to get in touch with every case.

Use existing city, State and private hospitals and sanatoria for all patients who can be admi[illegible]

Cultivate open-air sleping and living on the part of the outpatients, providing sleeping balconies if necessary.

Organize as many classes as possible in the churches, clubs, unions and societies.

Obtain volunteer visitors to work under direction of nurses in the classes and follow up "arrested" cases.

Work in conjunction with school physicians and nurses in having suspected cases examined.

Teach the preparation of simple, palatable dishes.

Investigate ventilation and sanitary conditions in the schools, factories and other places of employment.

Obtain information of all the bad housing conditions in every section of the city.

Work with the Health Department, the house owner and tenant in making each house a fit habitation.

It has been decided to appropriate $5,000 for the maintenance in the laboratory work the first year and $1,800 for the clinical department. As the [illegible] will have many ramifications, the first [illegible] conduct this labor will include $500 for an assistant to the superintendent; $2,300 for out-patient nurses; $1,200 for educational work; and $3,900 for emergency and special expenses. The institute will be governed by a board of directors composed of eight members, of which Provost C. C. Harrison of the University will be president ex-officio. The other members included the three heads of the institute and the following: Dr. John H. Musser, for medical council; Dr. Robert G. LeConte, of the board of trustees; George E. Gordon, representing the donor; and Dr. Charles J. Hatfield of the Pennsylvania Society for the Prevention of Tuberculosis. Members of the advisory council, who will hold a meeting once a year, are as follows:

Pathologic Department—Dr. William H. Welch, Baltimore; Dr. Theobald Smith, Boston; Dr. H. Gideon Wells, Chicago; Dr. Simon Flexner, Rockefeller Institute, New York. Clinical Department—Dr. James A. Miller, New York; Dr. Lawrason Brown, Saranac Lake, N. Y.; Dr Joseph Pratt, Boston; Henry Baird Favill, Chicago. Sociologic Department—Dr. Samuel McC. Lindsay, New York; William H. Baldwin, Washington; Dr. Herman M. Biggs, New York; Dr Samuel G. Dixon, Harrisburg, Pa.

GENERAL NEWS AND COMMENT

Insurance Examiners to Meet.—The American Association of Medical Examiners will meet in St. Louis, June 6 to 7, and will have headquarters at the Planter's Hotel. The secretary is J. C. Monihan, 134 N. Broad street, Philadelphia.

Ophthalmologists Meet.—At the annual meeting of the American Ophthalmological Society, held in Washington, May 3, Dr. Emil Gruening, New York City, was elected president; Dr. Edward Jackson, Denver, vice-president, and Dr. William M. Sweet, Philadelphia, secretary-treasurer (reelected).

Surgical Society Election.—The American Surgical Association, at its recent meeting in Washington, elected the following officers: President, Dr. Richard H. Harte, Philadelphia; vice-president, Dr. George A. Armstrong, Montreal; secretary, Dr. Robert G. LeConte, Philadelphia; treasurer, Dr. Charles A. Powers, Denver, and recorder, Dr. Archibald MacLaren, St. Paul.

Dermatologists Meet.—At the thirty-fourth annual meeting of the American Dermatological Association, held in Washington May 3-5, the following officers were elected: President, Dr. Douglass W. Montgomery, San Francisco; vice-president, Dr. Martin F. Engman, St. Louis; secretary-treasurer, Dr. James McF. Winfield, Brooklyn, and councilor at large, Dr. Charles J. White, Boston. Boston was selected as the next place of meeting.

Session of Throat, Nose and Ear Specialists.—The American Laryngological, Rhinological and Otological Society held its sixteenth annual meeting in Washington April 30, and elected the following officers: President, Dr. Chevalier Jackson, Pittsburg, Pa.; vice-presidents, Drs. Harris P. Mosher, Boston; Lafayette Page, Indianapolis; James L. Kent, Lynchburg, Va., and William F. Dudley, Brooklyn; secretary, Dr. Thomas J. Harris, New York City; treasurer, Dr. Ewing W. Day, Pittsburg, and councilors, Drs. James F. McKernon, New York City; Joseph A. White, Richmond, Va., and Norton L. Wilson, Elizabeth, N. J.

National Antituberculosis Association Meeting.—At the sixth annual meeting of the National Association for the Study and Prevention of Tuberculosis, held in Washington last week, the enforcement of the anti-spitting law was an important topic for discussion before the sociologic section. In forty-three cities the police are supposed to enforce this law; in sixteen cities health officers have this duty; and in eleven cities both police and health officers are responsible. Resolutions were adopted favoring the establishment of a national public health department, and opposing the action of the Oklahoma State Board of Medical Examiners in excluding from practice physicians who have had tuberculosis, and the Nebraska law which requires indigent tuberculosis patients to take the serum course of treatment. The following officers were elected: President, Dr. William H. Welch, Baltimore; vice-presidents, Drs. Victor C. Vaughan, Ann Arbor, and George Dock, New Orleans; secretary, Dr. Henry Barton Jacobs, Baltimore; and treasurer, Brigadier-General George M. Sternberg, U. S. Army, retired, Washington, D. C.

RECEPTION TO DR. ABRAHAM JACOBI

The Medical Society of the State of New York honored Dr. Jacobi by a reception at the New York Academy of Medicine on his eightieth birthday, May 6. The reception was very informal and the addresses brief.

Dr. Joseph D. Bryant, who presided, said: "It is hardly necessary for me to say that we are here to express in the simplest and most democratic manner possible our appreciation and affection for Abraham Jacobi. It is proper that you should understand this unpretentious plan of greeting is in accordance with the modest notions of Dr. Jacobi himself—in fact, a plan of welcome which Dr. Jacobi had hoped to extend to the members of his profession on his eightieth birthday, had not the opportunity been forestalled by the action of the Medical Society of the State of New York. The important fact should not be overlooked that we are honoring our profession and ourselves in thus honoring one to whom the full measure of honor is due, especially in professional and civic paths of thought and action. As our friend older in time than but few of us; younger in activity than most of us; larger in experience than any of us; how fitting, therefore, it is that we, on his eightieth birthday transmit to enduring substance the likeness of Dr. Abraham Jacobi."

Dr. Charles Jewett, president of the Medical Society of the State of New York, made the presentation in these words: "We are mindful, Dr. Jacobi, of the distinct service that you have rendered to the medical society of the state by your many helpful councils as well as by your scientific work. You have left us for an example a high professional standard and a high standard of good citizenship. We are keenly sensible of the extent to which your achievements have added to American medicine. The society wishes to show you the respect and affection in which it holds you, and as a token of that regard present you with a likeness of one of the world's most eminent citizens and most venerable men." The bronze portrait relief, the work of Miss Harriet W. Frishmuth, was unveiled by Dr. Jacobi's little granddaughter. It is mounted in an oak frame and is about two by three feet in dimension. It is a hip-length, three-quarters view, about three-fourths life-size likeness of Dr. Jacobi, in the attitude so familiar to all those who know him. He holds a paper in his right hand, while the left is in his coat pocket, and he seems to be about to begin reading. It is quite generally agreed that the bronze is a very accurate likeness of Dr. Jacobi and a credit to the artist. It bears the inscription, "Abraham Jacobi, aet. LXXX," and in the background the date, "MCMX."

Dr. Jacobi, in accepting the portrait, said: "This conspiracy of friends began in the house of delegates of the Medical Society of the State. Here I am, the beneficiary of their goodwill and old and young friendships, with nothing left me except an old heart full of gratitude and no words sufficient to express it. It is a source of gratification, however, that occasions are becoming more frequent for practitioners and scientists, who mostly lead hermit lives, to meet for a handshake and a cordial talk. I wish that I could sign my name to all the eulogies that have been pronounced on me lately. I am going to collect a number of them so as to learn what I shall have to live up to, in order not to disappoint my friends, in coming days, or months, or years. Preferably years, for I am not anxious to descend from the heights on which you have condescended to place me, or to give up the solution of common problems. The poet tells us the gods require many brave men in their service on this wide globe. My happiness is to have lived long enough for you to say that I was one of the brave men wanted for the tasks to be undertaken.

"Ancient medicine down to the Homeric age was revered for its service to the individual sufferer. Sacred was the man who relieved a pain or extracted an arrow. Wise men of antiquity and of the middle ages obtained for medicine the front seat in the council chamber of justice and of statesmanship and of human affairs generally. This was not appreciated, however, for centuries. It was but little over a century ago that J. P. Frank wrote his great work on forensic medicine, thus connecting the science and art of healing as it was then with the most sacred interests of civilized mankind. The middle of the past century established sound foundations on biological methods of experimentation and general research; individual disease came to be recognized as a normal process influenced by untoward, mostly preventable, circumstances; epidemics were studied in their connection with microbic germs and rendered amenable to prevention; and the salvation of the individual and of the commonwealth pinned its hope more on sanitation than on medication. With improving knowledge and philosophic insight the morals of the profession have improved. The physician who is in daily contact with suffering which speaks to his heart, and with the cares of worrying and distracted families and the human problems connected with all ages from infancy to senility, cannot help becoming more warmhearted with years, decades, generations. It takes malice and insufficient information to believe they can make the world believe that the unselfish workers at the bedside and in the laboratory, with a financial pittance or no reward at all, have become brutal and fiendish, and anxious to cover the trails of criminal cruelties committed against helpless animals. That charge might be dismissed as ludicrous; but being in its results dangerous to the public interest, to the health and life of all that is living, and to the confidence bestowed by the stricken people in their healers, it is high treason. So it has come to pass that they heap infamy on men in the profession, who, while making a scanty living out of their daily labor, are indeed undermining their own existence, digging their own graves by altruistic work for the extermination of disease. Why? They follow their flag. That flag has the inscription: 'Ignorance is a crime.' Under that flag this New York Academy of Medicine and the profession of the county, state and country have always cooperated. Under it this academy began twenty years ago its agitation for the creation of a central health bureau with a seat in the cabinet of our President. The American Medical Association and lately Senator Owen are active in the same interest which is the cause of eighty millions of people, who should not be born or not immigrate merely to be immolated on the altar of ignorance and neglect. Under it medicine and the doctor will be recognized as the guardian of yourself, your children and your neighbors, and the protector of social progress. Under it future generations of doctors will participate in the activities of political and social life, not forgetting their responsibilities to their personal duties and to their profession. Our political and social, and to a great extent, our scientific standing has been worked out in our democratic associations extending over a century. Our county and state societies have been the cradle of our existence, as they have fought for our rights and those of the people when jeopardized by ignorance or egotism. Our first allegiance, your first allegiance, belongs to the medical societies of the county and state. I do not believe in the good citizenship of an American physician whose honorable craving is satisfied without membership in his county and state societies. I wish to send out everybody here as an apostle of that conviction. The touching demonstration of the evening means nothing else, originating as it does in the State Society, but the recognition of my loyalty to the Medical Society of the State of New York. I wish that I might have been able to say something that might find its way to the hearts and minds of the public and of my professional friends. Such occasions as this have always made a lasting impression on me. They have solidified interests, warmed affections, enhanced mutual respect, guaranteed generous support. I once more have the honor to greet you, to thank you for your presence, and, Mr. Chairman and President, for your precious gift and the opportunity to see so many friends. I thank you a thousand times."

LONDON LETTER

(From Our Regular Correspondent)

The Cause of the Death of King Edward

The *British Medical Journal* states that for years King Edward suffered from emphysema and a tendency, more or less acute, to bronchitis with the usual symptoms of a distressing, ineffective cough and a difficulty of breathing. There was a crepitation at the bases of both lungs, indicating a chronic impediment to the free passage of air into the smaller bronchial tubes. He was subject to attacks of laryngitis, but except for some inflammatory thickening at the posterior part of the glottis and chronic catarrh of the throat, there was no trace of disease in the upper air passages. The king had what is known as a smoker's throat.

This, with the accompanying congestion and thickening, combined with the loss of elasticity in the lungs, made it increasingly difficult for him to clear his chest. The strain thrown on the heart by the obstruction to the passage of blood through the lungs, caused by the collection of secretion in the bronchial tubes, in turn caused dilatation of the right ventricle. The actual cause of death was heart failure due to increasing difficulty in pulmonary circulation.

It was a case of a type to be seen every day in thousands of elderly persons. Could the king have been induced to spare himself more he might have lived many years longer. He had suffered from glycosuria of a varying degree for a long time, but so far as can be judged this did not shorten his life.

Another condition which must have caused considerable discomfort at times was a certain weakness in the abdominal wall at the site of the operation for appendicitis which was performed in 1902.

The hurried journey from Biarritz, says the *British Medical Journal*, would have taxed his strength even had he been in perfect health. Suffering as he was from the effects of a recent illness, he might fairly have been excused from facing the risk of returning from the south to the cloudy skies, cold winds, and showers of the treacherous English spring.

Death from Hydrophobia After the Pasteur Treatment

The passing of a very wise act some years ago making the muzzling of dogs compulsory has exterminated rabies from Great Britain, and hydrophobia is never contracted there now. A soldier, aged 24, of splendid physique, died in London under distressing circumstances from hydrophobia contracted at Gibraltar. In that place both he and another man were bitten in the street by a mad dog and were sent to the Pasteur Institute last September. There was some delay in sending them as the North German Lloyd Steamship Company refused to take them and they had to wait for a P. and O. boat. One man died within a month, but the other came home to London and displayed symptoms of hydrophobia only a fortnight ago. He was taken to hospital in a desperate condition, unable to swallow, very violent, and saying he was going mad. He suffered from thirst but when he attempted to drink a severe spasm of the muscles of respiration occurred. During all his suffering he was sensible and he prayed the physician to cut his throat so that he could inspire.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 29, 1910.

The Vomiting of Pregnancy

On April 26 Dr. Pinard, professor of clinical obstetrics, read an interesting paper before the Académie de Médecine on the vomiting of pregnancy, in which he drew attention, especially, to the modifications of the pulse which accompany this vomiting. According to Dr. Pinard, the acceleration of the heart-beats is the first manifestation of the toxemia which brings on a vomiting in pregnant women, the toxemia being apparently due to a poison secreted by the ovary or by the ovum. It is necessary to take the pulse at least every four hours in a pregnant woman who is vomiting and presenting an acceleration of the heart-beats, in order to be informed in regard to her real situation, which is essential for the sake of prognosis and treatment. As soon as the pulse permanently exceeds one hundred pulsations the dehydration of the body seems to be accomplished rapidly. The skin, which has an earthy appearance, often presents a subicteric tint, the urine becomes scanty, thick and mahogany-colored; the respiration becomes accelerated; the tongue becomes red and has a varnished appearance; and with or without hallucinations and a tendency to syncope, coma appears and the woman dies. For every pregnant woman attacked with vomiting, Dr. Pinard advises, in the first place, a diet of milk and vegetables, and, if the vomiting persists, a purely milk diet. When this therapeutic régime is ineffective or when it has not been advised or followed and the vomiting persists, accompanied by the symptomatic picture previously mentioned, the number of pulsations per minute being above 100, it is necessary to interrupt the pregnancy at once. If there is any delay this intervention will become useless, for death will occur notwithstanding, caused by the poisoning of the nervous system.

Modification of the Properties of Leucocytes During Surgical Anesthesia

During the same session of the Académie de Médecine, Dr. C. Achard, professor of general pathology at the Paris college of medicine, read a paper from which it appears that in patients who undergo anesthesia, there is a temporary weakening of the two essential properties of the white corpuscles, namely, resistance and activity, which, though it disappears at the end of twenty-four hours, continues for a certain time after the awakening of the patients. This effect may be appreciated from the relative slowness with which, in spite of the rapidity of its action, the anesthetic is eliminated. Thus ether, in spite of its extreme volatility at the temperature of the body, is for a long time to be found in the expired air by which it is chiefly eliminated. The weakening of the passive and active properties of the leucocytes during surgical anesthesia shows that anesthetics exercise their action on the whole organism and even on the cells which are isolated from all direct influence of the nervous system. The intensity of these effects, their persistence for several hours and the consequences to the defense of the organism against poisoning and microbes—these considerations may aid in the comprehension of the cause of certain post-operative accidents, such as infections of respiratory or digestive origin.

Modification of the Law on the Practice of Medicine

A law modifying, as I indicated in my letter (THE JOURNAL, Aug. 7, 1909, liii, p. 468), the law of Nov. 30, 1892, on the practice of medicine has just been promulgated. While up to the present physicians, surgeons, dentists and midwives have been required to register their diplomas within a month after their establishment, according to the new law they must have their diplomas registered as soon as they have established and before beginning the practice of their profession.

The Châteauvillard Prize

This prize, amounting to 2,000 francs ($400) is awarded each year by the Paris college of medicine to the best work on medical science in French, printed between January 1 and December 31 of the previous year. This year the college has awarded this prize to Dr. A. Sézary of Paris, for his thesis entitled "Anatomic-Pathologic, Clinical and Experimental Researches on Serous Inflammations of the Adrenal Glands."

Prize in Naval Medicine

The prize in naval medicine for 1909 has been awarded to Dr. A. V. Michel for his report of general inspection in regard to the fishermen and the hospitals of Iceland.

Commission for the Revision of the Codex

A special permanent commission has been just organized at the Ministry of Public Instruction to prepare the next edition of the French pharmacopeia (Codex medicamentarius). This commission is charged, moreover, with the preparing for publication the supplements for the pharmacopeia of 1908, if any are required.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 21, 1910.

International Committee for Postgraduate Medical Education

At the Budapest international medical congress an international committee for the furtherance of postgraduate instruction was established under the initiative of the German central committee. The purposes of this committee were indicated as follows: The advancement of medical postgraduate instruction in various countries, a description of the arrangements with a view to mutual stimulation and instruction, information regarding the relation of academic instruction to postgraduate teaching in various countries, communications regarding methods of teaching, dissemination of information regarding the opportunities for postgraduate instruction in various countries, exchange of noted scientists for the purpose of instructing physicians in regard to important improvements, etc. The committee is now instituting a collective investigation and is sending out circulars for this purpose. Information is required regarding : A. The academic university instruction and the technic of preparatory instruction, of the teaching of pathologic anatomy, bacteriology and hygiene and in social medicine, and also regarding the legal requirements for the entrance of students and for the examinations, as also the organization of university instruction for military surgeons. B. Medical postgraduate work, its general organization and special institutions. C. Method of medical teaching, the auxiliary material for demonstrations and the institutions for teaching material, collections, etc. A second question blank enquires concerning the medical postgraduate courses that will take place in the period from September 1 to April 1, 1911, their place and time, whether foreigners may participate, what subjects will be taken up and what fees will be required. On the occasion of the hundredth anniversary of the Berlin University, an extraordinary session of the committee in Berlin is proposed to discuss the organization of the collective investigation and changes in the question circular; provision for an international distribution of information in regard to medical and postgraduate instruction, and also the fees for membership to be paid by individual states to the international committee.

Social Legislation

The data furnished to justify the new bill for social insurance throughout the empire contain statistical material of general interest because it shows in figures the extent of social legislation in Germany in many directions. The empire contributes for pensions for disability, disease and old age $12 (50 marks) per capita per annum. For the proposed insurance of survivors, according to the new bill, an imperial contribution must be made to every widower or widow of a pension of $12 and to every widow's settlement $12, and to every orphan pension $6, and to the dower of every orphan $4. Up to 1908 (since 1891) there has been paid altogether for disability pensions about $375,000,000 (1,500,000,000 marks); the empire has contributed to this about $130,000,000 (535,000,000 marks). For the contemplated disability insurance the contributions of the empire would have to amount to about $700,000.000 (2,815,000,000 marks). If the amounts contributed for the purposes of the social legislation by the employers, the workmen and the government are compared with each other, it is found that the government bears about a third of the expense of disability and inheritance insurance, and a third each is borne by the employers and by the workingmen. In the illness insurance, the expenditures for the years from 1904 to 1907 were as follows: For medical treatment about $25,000,000; for medicines and other material for treatment about $17,000,000; for payments to the sick about $50,000,000; for expense of care and treatment in hospitals about $17,000,000. The total insured were about 13.000,000 people. According to the new bill, the number of persons to be insured will be increased by about 8.000,000, so that hereafter the entire number of those entitled to insurance will amount to about 21,000,000. This extension of the illness insurance will increase the total expense by about $15,000,000. From the time that the social legislation went into force till the end of 1907, about $2,000,000,000 (8,095,386,971 marks) were expended by the employers, the workingmen and the government for the insurance of workingmen in the German empire, of which about $900,000,000 were applied to sickness insurance, $450,000,000 to accident insurance and about $650,000,000 to disability insurance.

Inebriety Statistics

Statistics of the persons addicted to alcohol in the general sanatoriums of Prussia from 1877 to 1907 have been published by the Prussian statistical bureau. The tables show a considerable and with some exceptions a steady increase in the number of inebriates cared for. in the sanatoriums; for 1877, 3.052 (2,854 men and 198 women); for 1887, 10,410 (9,775 men and 635 women); for 1897, 12.256, and for 1907, 17,302 (16.343 men and 969 women). This marked increase (about six-fold in thirty years) does not reflect accurately the increase in inebriety, as sanatorium treatment may be more extensively applied at the present time than thirty years ago, and the number of institutions has increased, while neuropathic inebriates permit themselves to be sent to sanatoria more readily than formerly.

The fact that the consumption of alcohol in Germany is very large is shown by an article in the *Reichsarbeitsblatt*, the imperial labor journal, according to which Germany stands second among the various countries in the use of spirits. The highest consumption of spirits is in Denmark. But as a whole, consumption of spirits is decreasing, except in America, and very markedly of late in Germany—a fact which is probably to be attributed to the boycott on spirits by the social democrats of which I have previously informed you. England takes first place in consumption of beer, Germany second. In the average for the years 1904 to 1908 there was a yearly consumption in Germany per capita of the population of 3.86 liters of 100 per cent. alcohol as spirits, and of 116.66 liters of beer. Assuming the average price per liter of 100 per cent. spirits as 24 cents (1 mark) and of a liter of beer as 8 cents (0.3 mark), the population thus spends annually per capita for brandy. 93 cents (3.86 marks) and for beer $8.40 (35 marks). With a total population of 64,000,000, this represents an expenditure of $596,880,000 (2,487.000,000 marks) alone for beer and spirits. If the use of wine is estimated according to previous figures at 5.82 liters per capita and the price is taken as 1 mark per liter, the amount stated would be increased by about $93.-122.000 (372,500,000 marks). The entire yearly expense for alcoholic drinks would approach $750,000,000 (3,000,000,000 marks), more than twice as much as the expense for the army and navy, more than four times as much as the appropriations for the entire industrial insurance, and about five times as much as the expenditures for the public schools. The rôle which alcohol plays in the economy of workingmen is shown by an investigation of the imperial statistical bureau among a limited number of families of workingmen, officials and teachers; the entire expenditures in 155 workingmen families for the whole year were $430 (1,7[illegible]0.35 marks), of which 4.8 per cent. was spent for alcoholic drinks; 50 families of government employees had an entire expense of $685 (2,850.89 marks), including 2.5 per cent. for drink. Among the families of workingmen, the expenditure for alcohol is not only relatively but absolutely higher. The relation of the expenditures for alcohol to those for food of workingmen is 8.02 per cent.; among government employees, 3.12 per cent. Other calculations show that German workingmen consume more alcohol than the American.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, April 28, 1910.

Fourth Meeting of the Society for Experimental Psychology

The Society for Experimental Psychology held its fourth regular meeting in Innsbruck, the capital of the Austrian Alpine district, and devoted four days to its work. There were present all leading investigators of this branch from Austria, Germany and Switzerland, while England and America were also represented. Professor Mueller of Göttingen was chairman of the meeting.

Professor Monakow of Zürich gave a report on the localization of various kinds of bodily movements in the higher brain centers. Pick of Prague dealt with results obtained by him in examinations of the visual fields by means of his improved perimeter. His observations confirmed the advisability of the general use of a perimeter in all cases of nervous disease. Spearman of London read a paper on the coefficients of correlation in the study of psychic disease, which he recommends very warmly, in spite of the skepticism of numerous psychologists. Lipmann of Berlin gave a synopsis of his very interesting experiments on the various types of visual perception. The same objects were perceived differently by different persons according to the fact that some persons regard more the color, others more the size, others more the shape of the things. S. Exner's paper on the hereditary transmission of psychic qualities was much discussed. He, like Kammerer, has found that instinctive actions in animals, when the latter have been forced to perform them, are inherited even in the second generation. Therefore, it is only just to assume that a higher psyche is also influenced by inherited psychic qualities. Guttmann's observations on color-blind dichromatic persons and on persons with anomalies of the color-sense show that these two types of persons are in near relations to each other, having in common the observation of differences of light, of saturation with color, and quick fatigue of the color-sense.

The third day was devoted to the study of physiology of the auditory organ. Alexander and Bárány of Vienna reported on the present state of the knowledge of the vestibular organ, while Kohler of Berlin read a paper on the perception of simple tones. He could demonstrate that each simple tone has a special pitch, which is constant. The series of the tones with the clearest pitch corresponds with the series of the vowels (as they are pronounced in German), u (oo), o, a (ah), e (ay), i (ee). The number of vibrations which corresponds with u is 263 vibrations; the next vowel, o, is distant nearly an octave (515 or double the number), a (German a or ah) has 1,046 vibrations (again an octave or double the number). The last day brought several papers by German and Swiss professors, but dealing with special subjects of minor importance for the practitioner.

Pregnancy and Labor of One of the Siamese Twins

There live in Prague twin sisters, known as the "Siamese twins," who are united to each other by a solid bridge of tissue, with some cartilage and bone enclosed, in the region of the hip-joint and the brim of the iliac bone. Several attempts at separation have been suggested, but refused by the twins because they desired to exhibit themselves for money. One of the twins suffered a few years ago from cholelithiasis, and had to be operated on in the surgical clinic of Prague, where examination revealed that apart from the malformation of the connecting iliac bone, the two persons have separate and independent bodies and independent bodily functions. A few days ago the twins, now 36 years of age, again came to the clinic, as the former patient again suffered from colicky pains. The surgeon made a diagnosis of advanced pregnancy or rather incipient labor. Although that possibility was absolutely denied by the girls, the patient soon gave birth to a healthy boy, and later, after repeated questioning, confessed. The other sister felt nothing at all of the pain of the mother so closely united to her, and when the next day the temperature of the mother went up two degrees the temperature of the other twin remained normal, showing the absolute separation of the two organisms as regards function and metabolism.

Pharmacology

MORE MISBRANDED NOSTRUMS*

The Food and Drugs Act Continues to Make Lying on the Label Unprofitable

When the Food and Drugs Act was passed in 1906, many makers of sophisticated food-stuffs as well as nostrum manufacturers, took the attitude that the law was more or less a joke. They looked on it as merely the outward and visible sign of the fruits of the campaign that had been carried on in lay and medical publications against "patent medicines" and food adulteration. As such these same manufacturers imagined that it would be but a few short months before the easily-forgetting public would cease to be interested in the subject, and the law would lapse into a state of innocuous desuetude. In the latter prophecy they have shown their powers of divination to be poor. Thanks to a virile and fearless official at the head of the Bureau of Chemistry, aided by a wide-awake medical profession and supported by many of the better class of lay publications, the "Pure Food Law" is an ever-present reality. What has been accomplished may be realized when it is known that in over 260 prosecutions the government has secured conviction in all but 3 cases. The majority of these violations of the law have been by food manufacturers rather than by nostrum makers, but a number of them have been by the latter. The following are the latest convictions of nostrum makers, with the facts as given in the government's official "Notices of Judgment:"

"DR. PARKER'S UNIVERSAL HEADACHE CURE"

This product was marketed by the W. R. Plank Drug Co., Fond du Lac, Wis., and was found to contain:

Acetanilid
Sodium bicarbonate
Caffein
Gummy material

The presence of acetanilid in the preparation was not stated on the label, though there was a reference to phenylacetamid, a synonym for acetanilid not recognized by the Food and Drugs Act for labelling purposes. The product was deemed misbranded and a fine of $25 imposed.

"O. K. HEADACHE CURE"

This nostrum was manufactured by the Houston Drug Co., Houston, Texas, and was labelled as follows:

"Cures any Kind of Headache, Perfectly Harmless."

A sample of the nostrum having been seized by the Federal authorities was analyzed and found to contain:

Acetanilid
Alcohol

Inasmuch as acetanilid is not a sure cure for headache, is not "perfectly harmless" and as, further, the law requires the presence of both acetanilid and alcohol to be stated on the label—which was not done—the product was declared misbranded. A fine of $50 was the result.

"HUTHWELKER'S HEADACHE TABLETS"

Adam C. Huthwelker of Baltimore puts out this preparation, which was claimed to be "A Positive Cure for Every Form of Headache and Neuralgia," and was further represented as being "harmless." Analyzed in the Bureau of Chemistry it was found to contain acetanilid. As the label failed to contain a statement of the quantity or proportion of the drug and as, in any case, acetanilid is neither "harmless" nor a "positive cure," the tablets were declared misbranded and Huthwelker was fined $10.

"PRESTON'S HED-AKE"

The label attached to the container in which this drug came, and which was sold by the Parker-Blake Company, Ltd., New Orleans, bore such statements as these:

"Perfectly Harmless."
"Will prevent headache."
"It cures while you wait."
"A remedy for any kind of headache."

It was analyzed by the government chemists and according to their reports was found to be another of the acetanilid headache "cures." In view of the false and misleading statements quoted above the preparation was declared misbranded and the defendant, who pleaded guilty, was fined $10.

"U-RE-KA HEADACHE POWDERS"

Still another acetanilid mixture was found to be misbranded; this was the "U-RE-KA Headache Powders" manufactured at Perlitch's Prescription Pharmacy, Brooklyn. The cause for action in the case lay in the fact that the proportion and quantity of acetanilid present was not stated.

"MOTHER'S FRIEND"

This widely advertised fake is put out by the Bradfield Regulator Company, Atlanta, Ga. Some of the claims made for it were:

"Shortens the duration of labor."
"Will assist in the safe and quick delivery."
"Prescribed by many of our best physicians."
"Causes an unusually easy and quick delivery."
"For relief of the suffering incident to child-birth."

Samples taken from the consignment seized were analyzed by the Bureau of Chemistry of the United States Department of Agriculture and found to consist of:

Oil
Soap (small quantity)

The United States judge naturally declared the stuff misbranded.

"MAKE-MAN TABLETS"

This nostrum, the product of the Make-Man Tablet Company, Chicago, was sold under the following claims:

"Contains no poison."
"A brain, blood and nerve food."
"Make-man tablets make blood."
"Sold under an absolute guaranty to restore lost vitality."

The government seized 360 packages of this product and on analyzing a specimen the "Make-Man Tablets" were found to consist essentially of:

Strychnin
Aloes
Iron Carbonate
Arsenic
Potassium Sulphate
Iron oxid

Strychnin and arsenic being poisons and many of the therapeutic claims made for the tablets being false, the court declared the nostrum misbranded.

ACETON

Horace N. Wheeler, Mystic, Conn., doing business under the name of the "Aceton Medical Company," puts out Aceton. This preparation, he claimed, was a sure cure and an infallible remedy for influenza, a preventive of pneumonia, and a sure cure for headache and neuralgia. On analysis Aceton was found to contain:

Acetanilid
Caffein
Sodium Bicarbonate

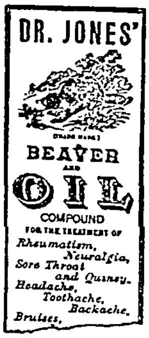
This misbranding resulted in Mr. Wheeler being fined $75.

"DR. JONES' BEAVER AND OIL COMPOUND"

This nostrum, manufactured by Morris Spiegel, Albany, N. Y., was sold "for the treatment of rheumatism, neuralgia, sore throat and quinsy, headache, toothache, backache, bruises, sprains" and numerous other conditions. Though beaver and oil compound was "warranted as represented" there was found no beaver oil, nor, in fact, any animal oil, but essentially:

Gasolin
Oleoresin of capsicum
Oil of Sassafrass

The product was declared misbranded.



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* These abstracts, based on the "Notices of Judgment" issued by the government, together with all others that have appeared in THE JOURNAL, have been reprinted in pamphlet form (illustrated); price four cents.

"SURE THING TONIC"

"Sure Thing Tonic" was sold by Furst Brothers of Cincinnati and, according to the government analysis, contained alcohol, sugar and water and was flavored with juniper. Some of the claims made for it were:

> "Renews Vital Force."
> "The Wonder Stimulant."
> "Restores Nerve Energy."
> "Invigorator and Exhilarant."
> "Distilled by Modern Methods evolved from half a century of practical experience."
> "Should be taken by every person, male or female, whether in need or not of a Tonic of its kind."

As the quantity or proportion of alcohol in the preparation was not given on the label, as the "booze" was not a "distilled product" as claimed and, further, as sweetened alcohol and water, flavored with juniper, will neither "restore nerve energy" nor "renew vital force," the product was deemed misbranded. The defendants pleading guilty were fined $10 and costs.

"PILSBURY'S COKE EXTRACT"

This product, which was manufactured by A. L. Pilsbury, Jr., New Orleans, La., was found on analysis to contain among other ingredients, cocain. As the label failed to contain a statement of the quantity or proportion of the drug, as required by the Food and Drugs Act, the preparation was declared misbranded and the manufacturer fined.

"CAFE-COCA COMPOUND"

This was a syrup manufactured by C. C. and F. H. Bowden, Athens, Ga., under the name of the Athens Bottling Works. On analysis it was found to contain cocain and not being labelled to that effect was declared misbranded and a fine imposed.

"LAMBERT'S WINE OF COCA"

The full name of this product was "Lambert's Wine of Coca with Peptonate Iron and Extract of Cod-Liver Oil" and according to the label it contained 22 per cent. alcohol together with "morrhuin, butylamin, iodin, bromin and phosphorus." It was manufactured by the Lambert Pharmacal and Chemical Co., Detroit. On analysis it was found to contain cocain, the presence of which was not given on the label, and it was further found to be free from iodin and bromin, said on the label to be present. Two shipments were seized and misbranding was proved in each case and two fines of $10 each imposed.

"KOCA NOLA"

This was a syrup for flavoring soda water and similar "soft drinks" put up by a company of the same name at Atlanta, Ga. This "Delicious Dopeless Koca Nola"—as the label had it—was found to contain cocain. Cocain being deleterious to health, was declared an adulteration under the act so that the Koca Nola Company was found guilty on two points: (1) failing to declare the presence of cocain and (2) adulteration. The Government made two seizures and the company was found guilty in each case and a fine of $25 on each count was imposed, making the total $100.

"RADAM'S MICROBE KILLER"

This hoary fake, which seems to have been revived lately, was shown up by Mr. Adams in the "Great American Fraud" and was at that time said to consist of:

Hydrochloric acid
Sulphuric acid
Red wine.

According to the government report the nostrum was represented as a cure for cancer, consumption, diabetes, diphtheria, yellow fever, paralysis and numerous other conditions. From recent advertising circulars obtained for The Journal files we find this fake recommended—in separate leaflets—as "The Sure and Safe Remedy for Men's Diseases" and also as "The Greatest Boon for Womanhood." Directions are given in the former pamphlet for the cure, by means of this stuff, of "gonorrhea," "gleet," "stricture" and "syphilis," while in the latter the cure of "leucorrhea," "falling of the womb," and numerous other "female complaints" is dealt with.

Twelve cases of the "microbe killer" were seized by the government and notice was served on Dean, Swift & Co., Washington, D. C., in whose possion this nostrum was found. No claimant having appeared to make answer to the charges the court decreed that the twelve cases of "Radam's Microbe Killer" should be destroyed and that Dean, Swift & Co. should pay all the costs of the proceedings.

[Contribution from the Chemical Laboratory of the American Medical Association.]

ZEMACOL

W. A. Puckner and W. S. Hilpert

Attention has been called to the vague and mysterious statements regarding a preparation called zemacol, manufactured by the Norwich Pharmacal Co., Norwich, N. Y. Because of the unsatisfactory statements regarding the composition of the preparation, it was considered of sufficient interest to make an analysis and determine its chemical constituents. Accordingly specimens of the preparation were obtained and examined.

The preparation zemacol (Norwich Pharmacal Co.), as found on the market, is a thick, pink, mucilaginous liquid, highly perfumed and having besides, a suggestion of a phenolic odor. The bottle bears a label on which appear the following statements:

> "A colloidal emollient containing extract of the rete mucosum of the healthy yearling lamb, combined with glycerin, salicylic acid and other antiseptic and aromatic oils. Useful in eczema and diseases of the integument where cell destruction is a prominent factor."

In the advertising matter the following claims are made:

> "An advance in animal therapy. . . ."
> " . . . increases the nutritive activity of the cell tissue of the skin through the absorbable extract of the rete mucosum."
> " . . . clinical tests show its efficacy in both the so-called moist and dry eczematous conditions of all parts of the cutaneous surfaces."
> " . . . rich in animal cells."

Since nothing could be found in the literature regarding the therapeutic action of an extract of the rete mucosum of the sheep it was thought possible that the statements on the label were given simply as a vague and mysterious means of indicating the presence of wool-fat (lanolin), and tests were made to determine the presence or absence of the latter substance. A substance was isolated from zemacol which had the physical properties of, and responded to some of the chemical tests for, wool-fat—but it was found in such small quantities as to indicate that it was not present as an active constituent. Since there are no definite tests for the detection of serums or animal extracts the presence or absence of these could not be demonstrated. Further examination indicated the presence of salicylic acid, a gummy material, having the properties of tragacanth, and glycerin. It is practically free from inorganic matter. By distillation a small quantity of oil was isolated, which possesses the characteristic odor of the preparation.

Quantitative estimations[1] indicated the presence of the above-mentioned constituents in approximately the following quantities:

	Per Cent.
Gummy matter having the properties of tragacanth..	2.02
Salicylic acid	0.67
Matter having the general properties of wool-fat (lanolin)	0.20
Glycerin	5.50
Volatile matter (water and alcohol)..................	91.00
Aromatic oils and phenol-like bodies..................	Trace

The results of the above analysis, together with advertising matter regarding zemacol, were submitted to Dr. William Allen Pusey, professor of dermatology and clinical dermatology, College of Physicians and Surgeons, Chicago, and past chairman of the Section on Dermatology of the American Medical Association, with the inquiry whether or not there was any record of investigations regarding the therapeutic value of an extract of the rete mucosum of the sheep and whether in his opinion the claims made for zemacol would be warranted. The following reply was received:

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[1] The details of analysis will be published in the annual report of the laboratory, or they may be had by sending a stamped addressed envelope.

> "So far as I know, nobody has ever thought of or proposed the use of an extract of rete mucosum as a therapeutic agent and if a serious suggestion of that sort had ever been made I believe I would know it. I can conceive of no service which such an extract could render and I think the suggestion of it is a highly fantastic idea. From the analysis which you furnish I should say that the mixture described is substantially the ordinary 2 per cent. solution of tragacanth in glycerin and water with a little antiseptic added to keep it from decomposing. That is a commonly known lotion, modifications of which are used in practically every hospital as a hand lotion, and has no magical virtues whatever. Incidentally, I should think it cost, aside from the labor, about twenty cents a gallon to make it."

Beecham's Pills and Other Things

In a recent letter Dr. R. A. Allen of Carbonado, Wash., asks the following questions: (1) What is the composition of Beecham's Pills? (2) What is the best excipient for tincture of cannabis indica? (3) Should the compound tincture of cinchona cause a precipitate when mixed with tincture of nux vomica? (4) Is potassium chlorate of any therapeutic value?

(1) According to "Secret Remedies," a book published by the British Medical Association and in which is given the analyses of many of the most widely advertised nostrums, an analysis of Beecham's Pills gave the following results:

> The pills had an average weight of 1¼ grains, and analysis showed them to consist of aloes, ginger and soap; no other medicinal ingredient was found. The quantities were approximately as follows:

Aloes	0.5 grain
Powdered ginger	0.55 grain
Powdered soap	0.18 grain

In one pill.

(2) While in pharmacy the term excipient is ordinarily used to designate the more or less inert substances employed to give consistency or form to pills or tablets, in this case it is probable that a method of using the tincture in a liquid mixture is what is wanted. If the intention is to prescribe cannabis indica in pill form the proper amount of the drug should be substituted for the tincture. Owing to the character of the drug the tincture is made by the use of strong alcohol. If this tincture is added to an aqueous liquid an unsightly precipitate of resinous materials forms. This precipitation is successfully overcome by employing acacia (gum arabic) as an emulsifying agent. The following prescription will give a satisfactory mixture:

℞.

	gm. or c.c.		
Acacia	3		gr. xlv
Tincture of cannabis indica	10	or	fl. ʒ ii ss
Water, to make	60		fl. ℥ ii

Triturate the acacia with 20 c.c. (fl.ʒii ss) water. Gradually add the tincture of cannabis indica and then sufficient water to make 60 c.c. (fl. ℥ ii).

The quantity of tincture may be changed so long as the acacia constitutes about 5 per cent. of the entire mixture.

(3) Tincture of nux vomica is quite commonly prescribed in combination with compound tincture of cinchona. As an experiment 15 c.c. tincture of nux vomica was mixed with sufficient compound tincture of cinchona to make 120 c.c. After standing for several days only a very slight precipitation had occurred.

(4) The internal use of potassium chlorate is no longer recommended by authorities on therapeutics and it is recognized as one of the most toxic of the potassium salts, causing methemoglobinemia, depression of the nervous system and degeneration of the kidneys if given in any but moderate doses. Its use by the laity should be discouraged and if prescribed at all for internal use great caution should be observed on account of its toxic character. As a local application in stomatitis and sore throat potassium chlorate is sometimes used although it is a very feeble antiseptic. It has also been recommended in chronic dysentery and in hemorrhoids applied by injections or enemata.

Correspondence

Mexico Honors Ricketts

To the Editor:—Believing that the numerous readers of THE JOURNAL will receive with satisfaction some news about the honors granted to the late Dr. H. T. Ricketts by the Mexican Government and the principal medical institutions of this city, in attention to the very important work done by that heroic investigator who gave his life for humanity and science, I have the honor to send you this letter.

In the first place, I must tell you that the Department of Public Instruction and Fine Arts of this republic, appreciating in all its value the work of Dr. Ricketts, put at his disposal the laboratories of the Bacteriological Institution, where that eminent doctor made the very remarkable investigations well-known to the readers of THE JOURNAL.

Unfortunately for science and humanity, Dr. Ricketts, who had gained the heart of all who have known him, contracted typhus in the course of his investigations (probably by the lice contaminated with the germs of the disease) and succumbed May 3, his death producing general consternation and sorrow in this city, especially in the Department of Public Instruction and Fine Arts and in the medical corps.

The President of the Republic resolved that the following honors should be shown the memory of the heroic investigator: (1) The laboratory in which Dr. Ricketts made his investigations will be named in the future "Dr. Howard T. Ricketts Laboratory;" (2) the National School of Medicine, the bacteriologic, the medical and the pathologic institutions will be put in mourning for three days; (3) a special commission of those institutions accompanied the body to the national railway station, where it was placed in the special car to Chicago; (4) the Department of Public Instruction and Fine Arts sent a special delegate to present to Mrs. Ricketts the expression of the Mexican government's sorrow for the death of her eminent husband; (5) the same department sent a flower crown with this inscription: "To the heroic investigator Dr. H. T. Ricketts. Homage of the Department of Public Instruction and Fine Arts, Mexico, May 3, 1910." Besides this, the department sent two telegrams to the Chicago and Pennsylvania universities, presenting them its condolence in the terrible loss suffered by these institutions with the death of their distinguished professor.

Finally, the National Academy of Medicine stopped its weekly session, and the president made a public panegyric on the courageous and unfortunate Dr. Ricketts.

As you have known, Mexico, appreciating duly the importance of the work made by Dr. Ricketts, and regretting truly the great loss suffered by science and humanity, has made the best homage to the remarkable scientist who gave his life, intending to save the lives of many people.

Hoping that this news will be interesting to you and to the numerous readers of my loved JOURNAL (allow me these words), I remain

ALFONSO PRUNEDA.

The University School of Medicine

To the Editor:—The modern trend of medical education in this country is bringing the medical school into close relation with the university, from which it receives not only financial aid but, what is even more important, the inspiration of university ideals. It is to be hoped that this movement means not only the passing of the proprietary medical school but the abandonment of that conception of the medical college which makes it an institution intended solely for drilling the student in the established facts in medicine, and the substituting for it the spirit of university teaching whereby the student is led to approach these facts with the open, unbiased mind of the investigator. This is the sort of training that best prepares the student for solving the problems encountered in the routine practice of medicine.

The desirability of coming into closer contact with the university has resulted in many instances in the voting into the university as its department of medicine, a proprietary medical college, body and soul, as if the act of voting it in could make it a real department of the university. Mr. Pritchett in his recent address before the Council on Medical Education of the American Medical Association in The Journal, April 2, 1910, p. 1109, has pointed out how in many instances the university or college in taking in the proprietary medical school has not only failed to give any financial support to its so-called medical department, but has *not even made itself* responsible for the standards of admission, much less extended its influence and ideals to the betterment of the medical school. The only apparent object to be gained by association of this sort is the supposed prestige to the medical school in being known as the medical department of the university and to the university in thus being able to claim a medical department.

To vote into a university a medical school organized as are the proprietary medical colleges, where neither the facilities nor the ideals are on the university basis, cannot make such a medical school a *bona fide* department of the university. It can only become an actual university department of medicine when it has been organized on exactly the same basis as any other scientific department of the university.

It is common knowledge that a great many institutions parade under the name of college which are only doing the work of a preparatory school or of a high school. In the same way the term "university" has been appropriated by institutions which are scarcely doing the grade of work recognized as the minimum standard for a *bona fide* college. A university is not distinguished from a college by the number of its students or even by the number of its departments, as is sometimes assumed. A college is essentially a teaching institution, whereas a university implies primarily an institution where, in addition to the teaching, research is fostered. Instruction is the chief aim of the college. Investigation is fundamental in the idea of the university. A *bona fide* department of a real university must therefore be a department in which the fundamental conception of a university is carried out in its organization, a department in other words in which the idea of investigation is made prominent. The medical department of a university should be a department in which the university idea is carried out. It is this ideal in medical education for which we should be working, and it is to this that the trend of modern medical education is surely leading. To recognize a school of medicine organized on the basis and with the ideals of the proprietary medical school as the medical department of a university not only hurts the reputation of the university but such a recognition is an aspersion on the ideals of the medical profession. To quote from the address of President Schurman delivered before the Council of Medical Education of the American Medical Association, which appeared in The Journal, April 16, 1910, p. 1281: "Have done with this sham in medical education, . . . let this new institution be not an attachment (or detachment) to the university, but an organic and vital member like other departments of the university, and like them, animated by its spirit and controlled by its standards."

George E. Shambaugh, Chicago.

Reducing Infant Mortality in Large Cities

To the Editor:—In connection with an interesting paper which appeared in The Journal, April 16, by Dr. H. Schwarz, on "A Plan by which Infant Mortality Can Be Reduced in Large Cities," I should like to state that the following up of infants born in a maternity service is also being done in some other institutions in this country. In the *Archives of Pediatrics*, July, 1907, I wrote: "Maternity hospitals could do much by giving mothers detailed instruction in the care and feeding of infants; and to those mothers who cannot give the breast, demonstrations in the preparation of the food could be given during the last two or three days of their stay at the hospital. By explaining to them the great importance and value of regular supervision a certain number could be induced to report regularly at stated intervals during the first year in order to have the infant weighed and to receive instruction in care and feeding."

This method was inaugurated by Budin at the Paris Maternity Hospital many years ago. For over a year I have carried it out in the maternity service of the Lebanon Hospital, and have no doubt that it is being done in other institutions in this country. It will probably be a long time before it will be possible to establish 50 such clinics at an annual expenditure of $150,000, as Dr. Schwarz suggests. At present all that such a clinic can do is to demonstrate the fact that in a certain series of cases the infant mortality can be considerably diminished. Others may then be induced to carry out the work on a larger scale.

This method does not touch the 50,000 or more babies annually born in New York City in the service of midwives. In this class the mortality is very high. These can only be reached by a plan which I proposed in the paper above cited, and again discussed in a paper in *Pediatrics*, August, 1909. A nurse attached to the department of health visits the mother as soon as the birth certificate is received by the department from the midwife. This is now being done in this city. The plan has the great advantage that there is no interference with regular practitioners of medicine; its greatest value lies in the fact that the vast majority of infants can be kept at the breast.

In this way I believe it is possible to reduce the infant mortality in New York City by at least 5 per cent. in this class of patients, which would mean a saving of more than 2,500 lives annually.

Charles Herrman, M.D., New York.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

QUININ AND UREA AS LOCAL ANESTHETICS

To the Editor:—Please give me information and literature in regard to the chemistry and history of the use of quinin and quinin and urea hydrochlorid as local anesthetics. C. B.

To the Editor:—I have been particularly interested in the results of the combination of quinin and urea hydrochlorid with the prolonged exemption from pain, especially in neuritis, which recently has been more often recognized than formerly. Not only am I interested in the combination of these two drugs, but my investigation has lead me to inquire which produces the salutary results. While I do not wish to detract from the credit due the physician first suggesting this addition to our surgical resources, I wish to say that I have been using quinin alone for more than fifteen years as a local anesthetic. I am not the originator of this method of using quinin, as more than seven years prior to my adoption of it for this purpose, Dr. William Sylvester, an old and able army surgeon of Ohio, and a resident of this city, had been using it for a number of years and first taught me its use in pleurisy (neuritis), pneumonia and advanced tuberculosis cases.

I feel safe in saying that Dr. Sylvester was beyond doubt the originator of the idea. He did not to my personal knowledge use this drug hypodermically. His results with quinin on a denuded surface were so pleasingly satisfactory that up to the day of his death he used this method of treatment for the alleviation of pain and the production of anesthesia. W. S. Hoy, Wellston, Ohio.

Answer.—Quinin and urea hydrochlorid is a double salt of quinin and urea made by dissolving quinin hydrochlorid in hydrochloric acid, adding pure urea, filtering the mixture through glass wool and allowing it to crystallize. It is soluble in its own weight of water and in alcohol. It has the actions of quinin, is nonirritating when injected hypodermically, and produces local anesthesia, lasting in some instances several days, depending on the strength of the solution.

Dr. Hoy asserts that he has used quinin for fifteen years by external application on denuded surfaces (not hypodermically), and believes that Dr. Sylvester, of Ohio, from whom he obtained the suggestion, is entitled to credit for priority.

Helmholtz used it unsuccessfully in watery solution as a spray in hay fever. Fulton (The Journal, July 30, 1904, p. 1393) attributed this failure to the fact that watery solutions are transient in their effect in relieving the coryza and the other symptoms, and he therefore followed the spray with an ointment of quinin in white petrolatum, 30 grains to the ounce. This, he asserted, gave continued relief from the symptoms while it was employed. Thibault (*Jour. Ark. Med. Soc.*, September, 1907; abstr. in The Journal, Nov. 16, 1907, p. 1719) also reports its efficiency for anesthesia when used locally on cotton or gauze on mucous membranes or denuded surfaces in strength of 15 or 20 per cent. In a case of strangulated hernia in an aged woman, reported later (The Journal, April 23, 1910, p. 1375), he used the infiltration anesthesia in 0.25 per cent. solution. On manipulating the viscera and peritoneum pain was caused. Some of the same solution was poured on these structures and the operation completed without pain. He suggests that it might be used in more extensive abdominal operations, *involving manipulation of the viscera and peritoneum.*

Quinin has been used hypodermically for a number of years in the treatment of malaria, but its hypodermic use as a local anesthetic is more recent. In the communication mentioned above H. Thibault reported on its hypodermic use both experimentally on himself and practically in the amputation of a finger, in the removal of a large fatty tumor and in the divulsion of the sphincter ani for the removal of a foreign body. He first used quinin and urea hydrochlorid, but stated that any of the salts of quinin could be used for this purpose, in 1 to 2 per cent. solution, which might be boiled any number of times without destroying its efficiency. He said: "It is safe, and the anesthesia lasts from one to six hours." In August, 1908, E. J. Brown (THE JOURNAL, Aug. 8, 1908, p. 496) reported the use of 3 per cent. solution by hypodermic injection in the removal of the tonsils, giving perfect anesthesia for a prolonged period after the operation and limiting the bleeding during the operation. Dr. V. M. Griswold, of Fredonia, N. Y., then called attention (THE JOURNAL, Aug. 22, 1908) to the fact that he reported on the hypodermic use of quinin as an efficient local anesthetic and much safer than cocain, in July, 1896 before the Chautauqua County (New York) Medical Society (*Buffalo Med. Jour.*, August, 1896, p. 32). Dr. Griswold claims that his use of quinin as a local anesthetic was the result of experiments with various substances in the endeavor to find one equally efficient, but less dangerous than cocain.

Dr. John A. Wyeth (*New York Policlinic Journal*, January, 1908) reports on the use of quinin and urea for this purpose in an article entitled "A New Local Anesthetic of Great Value." On account of two cases of severe sloughing after deep infiltration Wyeth has abandoned its use, and is now trying a different formula which he will report on later.

The first attempt to explain the anesthetic effect of the solution is found in a paper by E. F. McCampbell (THE JOURNAL, March 16, 1907, p. 919), who found that quinin hydrochlorid had the power of causing temporary paralysis in experimental animals, which he believed to be due to its coagulating action on the protoplasm of the peripheral nerves. He found that atrophy of the extremities resulted after large doses.

Hertzler, Brewster and Rogers (THE JOURNAL, Oct. 23, 1909, p. 1393) confirmed Thibault's statements, but found that in hernia operations healing of the external wound was somewhat delayed on account of the thickening of its edges, which proved to be due to an excessive fibrinous exudate produced by the 1 per cent. solution. When 0.25 per cent. instead of 1 per cent. solutions were used the fibrinous exudate was reduced and healing was not perceptibly delayed. Solutions of the 0.25 per cent. strength produced perfect though less prompt and lasting anesthesia. Hertzler, Brewster and Rogers agreed with Thibault that a 10 or 20 per cent. solution should be used externally or on mucous membranes, and with Brown that in tonsillectomy a 3 per cent. solution is best. They recommend this form of anesthesia especially in operations about the anus, as in hemorrhoids and fistulas, in which prolonged anesthesia from seven to ten days is particularly desirable. They have found that it is preferable to dissolve the quinin and urea hydrochlorid in sterile water instead of salt solution; the former gives a more lasting anesthesia, and the latter has no advantage. They recommend it as being harmless in almost any amount. There are, however, many reports of untoward effects from the hypodermic use of quinin in malaria and other affections in which it has been used. But in the weak solutions of 0.25 to 1 or even 3 per cent. recommended, unpleasant effects are unlikely to occur, unless there is an idiosyncrasy to quinin in any amount. Quinin and urea hydrochlorid, therefore, seems to be a valuable addition to the list of local anesthetics, on account of its cheapness, its simplicity of preparation and use, its safety, its hemostatic effect and the prolonged anesthesia produced.

Chondroendothelioma or Mixed Tumor of the Submaxillary Gland.—Martland (*Proceedings New York Pathological Society*) removed at autopsy a mass, which included the tongue, larynx and trachea, from a man aged 37 who had died of pulmonary tuberculosis. At the age of 22 the patient had noticed a small lump in the neck which grew for two years and then for thirteen years remained quiescent. It never had caused pain or discomfort. A diagnosis of calcified tuberculous glands had been made. At the right of the median line there was an oval, more or less nodular firm tumor, which was encapsulated and which on section had a spongy appearance, was not vascular and was light gray in color throughout. A diagnosis of peritheliomа of the carotid was made, but on further study by the society it was corrected to the above diagnosis.

The Public Service

Medical Department, U. S. Army

Changes for the week ended May 7, 1910:

Hansell, H. S., capt., April 29, leave of absence extended until such time as it will be necessary for him to start under his orders to take transport to sail for the Philippine Islands, June 6, 1910.

Miller, Reuben B., capt., April 30, relieved from duty at Ft. Meade, S. D., and ordered to Army and Navy General Hospital, Hot Springs, Arkansas, for duty.

Pinkston, O. W., capt., April 30, relieved from duty at Army and Navy General Hospital, Hot Springs, Arkansas, and ordered to Ft. Meade, S. D., for duty.

Jenkins, F. C., 1st lieut., M. R. C., April 30, on expiration of his official leave of absence will proceed to Ft. Leavenworth, Kansas, for duty at that station.

Pinquard, Joseph, 1st. lieut., M. R. C., April 30, relieved from duty at Ft. Leavenworth, Kansas, and ordered to Ft. Moultrie, S. C., for duty at that station.

Delacroix, A. C., 1st. lieut., M. R. C. April 30, upon arrival at San Francisco, will proceed to Boise Barracks, Idaho, for duty at that station.

Smith, Lloyd L., captain, April 30, granted four months leave of absence.

Rhoads, Thomas L., major, May 2, left Walter Reed General Hospital, Takoma Park, D. C., on ten days leave of absence.

Mason, George L., dental surgeon, left station on May 2 on 10 days leave of absence.

La Garde, Louis A., colonel, May 2, ordered to proceed to St. Louis, for the purpose of reading a paper on "Gunshot Wounds in Recent Wars," before the Section on Surgery of the American Medical Association, June 7-10, 1910.

Craig, Charles F., captain, May 2, detailed to represent the Medical Department of the Army at the seventh annual meeting of the American Society of Tropical Medicine to be held at St. Louis, June 11, 1910.

Howard, Deane C., major, May 2, ordered to proceed to Columbus Barracks, Ohio, for temporary duty, and on completion thereof will proceed not later than May 2, 1910, to Jefferson Barracks, Missouri, as heretofore ordered.

Scott, Minot E., dental surgeon, April 21, ordered to proceed to several posts in the Department of the Columbia, for temporary duty.

Taylor, Blair D., colonel, April 26, detailed as chief surgeon, for the Camp of Instruction to be held at Chickamauga Park, Georgia, in July, 1910:

Medical Corps, U. S. Navy

Changes for the week ending May 7, 1910:

Turner, W. B., asst.-surgeon, ordered to duty at the Naval Hospital, Yokohama, Japan.

Downey, J. O., asst.-surgeon, ordered to duty at the Naval Hospital, Norfolk, Va.

Jacoby, A. L., acting asst.-surgeon, appointed acting asst.-surgeon from April 27, 1910.

Angeny, G. L., surgeon, detached from the *Indiana* and ordered to continue other duties.

Langhorne, C. D., surgeon, ordered to duty at the Naval Hospital Naval Home, Philadelphia.

Valz, E. V., P. A. surgeon commissioned P. A. surgeon from March 5, 1910.

Ledbetter, R. E., surgeon, detached from the *Relief* and ordered to continue other duties.

U. S. Public Health and Marine-Hospital Service

Changes for the week ended May 4, 1910:

Pettus, W. J., asst.-surgeon general, directed to proceed to Galveston, El Paso, Texas, and Fort Stanton, N. M., on special temporary duty.

Austin, H. W., surgeon, directed to proceed to Boston on special temporary duty.

Brooks, S. D., surgeon, and McCoy, George W., P. A. surgeon, detailed to attend the meeting of the Southern California Medical Society at Redlands, Cal., May 4, 1910.

Nydegger, J. A., surgeon, granted 5 days' leave of absence from May 2, 1910.

Francis, Edward, P. A. surgeon, detailed to represent the Service at the meeting of the International Association of Medical Museums, to be held in Washington, D. C., May 3-4, 1910.

Kolb, L., asst.-surgeon, granted 1 day's leave of absence in April, 1910, under paragraph 191, Service Regulations.

Stiles, C. W., professor, Hygienic Laboratory, detailed to represent the Service at the annual meeting of the Texas State Medical Association, to be held in Dallas, May 10-12, 1910.

Bailey, C. A., acting asst.-surgeon, granted 3 days' leave of absence from April 28, 1910.

Diaz, Jose A., acting asst.-surgeon, granted 30 days' leave of absence from Feb. 4, 1910, and leave, without pay, to include May 14, 1910.

Deerhake, W. A., acting asst.-surgeon, granted 7 days' leave of absence in April, 1910, under paragraph 210, Service Regulations.

Goldsborough, B. W., acting asst.-surgeon, granted 3 days' leave of absence, without pay, from April 26, 1910.

Gustetter, A. L., acting asst.-surgeon, granted 4 days' leave of absence from April 25, 1910.

Hollman, H. T., acting asst.-surgeon, granted 4 days' leave of absence from April 2, 1910, under paragraph 210, Service Regulations.

Stewart, W. J. S., acting asst.-surgeon, granted 30 days' leave of absence, without pay, from April 23, 1910.

Watson, H. J., acting asst.-surgeon, granted 19 days' absence from May 30, 1910.

Society Proceedings

COMING MEETINGS

American Medical Association, St. Louis, June 7-10.

American Academy of Medicine, St. Louis, June 4-6.
American Assn. of Medical Milk Commissions, St. Louis, June 6.
American Association of Medical Examiners, St. Louis, June 5-6.
American Gastro-Enterological Association, St. Louis, June 6-7.
American Proctologic Society, St. Louis, June 6.
American Society of Tropical Medicine, St. Louis, June 11.
American Urological Society, St. Louis, June 6-7.
Assn. of Amer. Teachers of Diseases of Children, St. Louis, June 6.
Connecticut State Medical Society, New Haven, May 25-26.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 18-20.
Maine Medical Association, Bar Harbor, June 29-30.
Massachusetts Medical Society, Boston, June 7-8.
Nat. Con. State Med. Exam. and Licensing Bds., St. Louis, June 6.
New Jersey Medical Society, Atlantic City, June 28-30.
North Carolina, Med. Soc. of State of, Wrightsville Beach, June 21.
Rhode Island Medical Society, Providence, May 31.
Wisconsin, State Medical Soc. of, Milwaukee, June 22-24.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-fifth Annual Meeting, held in Washington, D. C., May 3-5, 1910

The President, Dr. Edward P. Davis, Philadelphia, in the Chair

An address of welcome was delivered by Dr. I. S. Stone, Washington, D. C., which was responded to by Dr. Seth C. Gordon, Portland, Me.

Bilateral Tubal Pregnancy; Coincident Development

Dr. Palmer Findley, Omaha: Review of the literature on the simultaneous development of a fetus in either tube revealed 28 cases reported as examples of bilateral tubal pregnancy, but only 8 are unquestioned as being of simultaneous development. Of 20 cases of doubtful identity, the clinical diagnosis was not supported by the macroscopic and microscopic findings of fetal structure in the 2 tubes. To these 8 cases I add a ninth in which there was a probable simultaneous development of a fetus in each tube, with rupture of the right tube and the escape of the ovum through the fimbriated end of the left tube. The escape of the 2 ova was probably simultaneous. The pelvis was full of blood and there was a general peritonitis. Decidual tissue and chorionic villi were found in both tubes, but neither fetus was discernible. Both ovaries were cystic and adherent. In the right ovary was a fresh corpus luteum. An abdominal section was peformed with the removal of both tubes and escaped blood. The abdomen was drained. Death ensued from general peritonitis.

Reimplantation of Kidney

Dr. Dougal Bissell, New York, reported a case of successful reimplantation of a pelvic kidney in the female, and made some remarks on the surgical treatment of kidney misplacements in the true pelvis.

The Chief Cause and Prevention of Postoperative Cystitis

Dr. Joseph Taber Johnson, Washington, D. C.: I desire to emphasize the necessity for more strict prophylaxis and, when cystitis is diagnosed, a more active and continuous treatment, not only to bring about an early cure, but to prevent the transition from an acute to a chronic condition. Cystitis occurs in woman more frequently after abdominal than other operations. When patients are catheterized several times daily for a week or even longer, the conditions are present which easily result in the production of a cystitis unless great care is practiced to prevent trauma or infection.

DISCUSSION

Dr. Henry T. Byford, Chicago: At the Woman's Hospital, Chicago, in the earlier days, women were catheterized before all operations because of the fear of a distended bladder. As the result cystitis developed occasionally. This practice was stopped. I do not know whether it is the general custom or not among practitioners, but I induce my patients to pass urine before operation, and there are few patients who cannot do this. By so doing, the danger of cystitis from the use of the catheter is eliminated. Some nurses in using the catheter allow the labia minora to drop over the urethra, in this way germs are deposited on the end of the urethra and are carried in with the catheter. The nurse should irrigate the urethra so that it is clean, and great care should be taken to prevent anything from being carried into the urethra with the catheter.

Dr. C. C. Frederick, Buffalo: In order to prevent chronic cystitis, chronic trigonitis, it is necessary to abstain from catheterization, if possible, but if catheterization is resorted to, it should be done under the most favorable conditions, and every precaution taken to prevent infection of the bladder.

Dr. Philander A. Harris, Paterson, N. J.: In taking the history one should be exceedingly careful to have a record of patients as to whether they have pain in urinating or a history of cystitis prior to operation. An important point is to require every patient admitted to the hospital for operation to urinate in the dorsal position.

Dr. Frederick J. Taussig: If we can get patients to void urine spontaneously, we will eliminate very largely postoperative cystitis. A few cases of so-called spontaneous infection, or infection from surrounding infected tissues have been reported, but they are questionable.

Dr. Edward Reynolds, Boston: Infection of the bladder comes not so much from the introduction of the point of the catheter into the urethra as from the fact that in the subsequent passage of the instrument the nurse allows the labia to fall against the catheter and material is carried in in that way.

Dr. J. M. Baldy, Philadelphia: If nurses are taught how to use the catheter properly, and do not allow the labia to come together from the time they have disinfected the parts, the danger of cystitis would be materially reduced.

(*To be continued*)

FLORIDA MEDICAL ASSOCIATION

Thirty-seventh Annual Session, held at Jacksonville, April 6-8, 1910

The President, Dr. H. E. Palmer, of Tallahassee, presiding

President's Address: The Duties of the Profession to the Association and the Public

Dr. H. E. Palmer, Tallahassee, reviewed the history and early difficulties of the Association, enjoined an earnest effort on the part of each member to increase the membership, commended the work of the State Board of Health in its laboratory and field divisions, especially in its campaign against hookworm disease, a careful education of the public to combating fallacies widely entertained concerning vivisection and vaccination, the regulation of the practice of medicine and a deeper interest in public affairs of the state.

Election of Officers

Officers for the year 1910 were elected as follows: President, Dr. J. D. Love, of Jacksonville; first vice-president, Dr. A. H. Freeman, of Starke; second vice-president, Dr. L. A. Peek, of Melbourne; third vice-president, Dr. F. C. Moor, of Tallahassee; councilor first district, Dr. J. H. Pierpont, of Pensacola; councilor second district, Dr. H. E. Palmer, of Tallahassee; councilor third district, Dr. L. M. Anderson, of Lake City; librarian, Dr. C. E. Terry, of Jacksonville.

Chairman of committees for 1910: Legislation and public policy, Dr. H. E. Palmer, Tallahassee; publication, Dr. J. D. Fernandez, Jacksonville; scientific work, Dr. G. R. Holden, Jacksonville; education, Dr. J. H. Hodges, Gainesville; arrangements, Dr. F. C. Moor, Tallahassee.

Tallahassee was selected as the place of meeting in 1911.

A special committee was appointed, with Dr. Graham E. Henson of Crescent City, chairman, to conduct an active campaign for the control and prevention of malaria in Florida, as suggested in a paper read on this subject by Dr. Hanson.

Dr. R. P. Daniel of Jacksonville, the only member remaining alive of those who organized, in 1853, the Duval County Medical Society, and of those who, in 1874, organized the Florida Medical Association, delivered an address of welcome on behalf of the Duval County Medical Society, in which he gave an interesting account of the organization and history of the two bodies.

The report of Dr. J. H. Pierpont, delegate to the A. M. A. in 1909, urged the importance of every member becoming a member of the A. M. A. and supporting its efforts to solve the problems coming before it and endorsing the work of the national body in its various activities for the elevation of the profession and the science of medicine.

Oration on Pasteur

Dr. Hiram Byrd, Jacksonville, orator, selected as his subject, "An Appreciation of Louis Pasteur." The address dwelt in detail on the interesting and valuable work of Pasteur in chemistry, mollecular physics, fermentation and serotherapy.

A Case of Uncinariasis with Post-mortem

Dr. William E. Ross, Jacksonville, reported a case of uncinariasis with autopsy report by Dr. H. Hanson:

There was no albuminuria nor were there casts in the urine; nor had there been for two weeks. The child had previously been treated for hookworm. I began the treatment on betanaphthol without noting acute Bright's disease; later, when I changed to thymol the acute nephritis appeared. I think that death was due to the toxins of the disease and not to the thymol as eight grains was the largest dose given at one time; two such doses were given in one day.

I have under treatment now a brother of the patient cited in my paper. Hemoglobin is 15 per cent. He has had thymol three or four times, and on January 25 I began with betanaphthol, discarding the thymol in this case. The hookworm eggs are still present.

DISCUSSION

Dr. F. C. Moor, Tallahassee: I have seen a great many cases of hookworm disease and have frequently obtained specimens for examination. In one case the eggs were found and three successive treatments, ten days apart, with betanaphthol, were given; the examination after the third course showed no eggs. But that was the only case in which I have successfully used betanaphthol.

Dr. A. H. Freeman, Starke: There are several interesting points about Dr. Ross' case. Those of you who were present at Tampa in 1907 will recall that I reported some twelve cases that had been treated with thymol and some others with betanaphthol. My records show that I used the microscope in the diagnosis of the disease, and after the several treatments I always examined for the eggs to determine just how many courses of the several medicines were required in the cases to rid the patients of the parasites. You will recall that in these cases treated with thymol ten weeks was required, one treatment each week. The point occurs to me that the one case reported by Dr. Ross, if there were no others like it, refutes the statement made lately in public that 25 cents' worth of thymol would cure any case of hookworms. That is a great mistake. I recall the state health officer telling me three years ago of the work done by Dr. Bailey K. Ashford in Porto Rico, and that he had discarded betanaphthol from his list of treatments for hookworms for the reason that the continued use of betanaphthol was injurious to the kidneys. I saw no bad effects, however, from either of the drugs. One thing is sure: hookworm disease is not so easily cured, and this is proven by Dr. Ross' case and by cases in which I have used the microscope and repeatedly found the eggs.

Dr. E. P. Webb, Ponce de Leon: My experience with thymol has been entirely successful and I have had no occasion to use anything else. There have been several cases in my practice with remarkable results. In one a specimen was sent to the State Board of Health laboratory for examination; the report stated that hookworm eggs were not found, but that the ova of the tapeworm were present. The patient was a boy, hemoglobin 15 per cent. In another case thymol brought not only the hookworms, but also two dozen worms twelve inches or more in length. Of course, in the case of the tapeworm thymol was not given. The State Board of Health in this way finds sometimes more than one parasite present.

Dr. E. E. Lindeman, Tampa, recommended that thymol be administered in cachets triturated with equal parts of milk and sugar; before using, the cachets should be well softened in water.

Dr. E. P. Webb: I would like to know more about the toxic effects of thymol. I have given perhaps more than a hundred doses and have never observed any weakness from it. If the thymol will cause nephritis we ought to know it.

Dr. Ross: It seems to me that is no theory. Thymol is the treatment the State Board of Health gives and recommends, and this boy has been treated by a member of the staff. He came to the hospital with acute nephritis. He was there six weeks. After I got rid of the nephritis I started him on betanaphthol. After two weeks he was cleared of albumin and casts and I gave two doses of thymol, eight grains each, one at 6 a. m. and one at 7. He had no oil for three days, but was given salts before thymol was given, and I think twenty-four hours after the thymol, with practically no toxic effects and no change of pulse, but had albumin and casts at the end of the third day. In about four weeks it had apparently cleared up. I did not feel justified in giving any more thymol after the toxic effects noted. I then gave betanaphthol until the end came. I would not in the routine cases expect this effect on the kidneys, however.

Dr. W. P. Adamson, Tampa: The question appears to me to resolve itself into one which considers the means of administering thymol and getting it into and through the intestinal tract without its being absorbed. Only in so doing, I think, can we feel authorized in proceeding, and I think we can further conclude that when we get the toxic effect there has been some degree of absorption, and it should be the next step to inquire whether or not, on account of some abnormality in the intestinal tract, something has not remained in the nature of oil for several days which possibly might account for the absorption of the thymol.

In regard to the conclusion that the hookworm enters first through the mouth and second through the hair follicles, I would like to mention a case which to me appeared to be a little unusual and a little irregular. A man, aged 48, came to me with a history of having been sick three years. He had been strong and robust. While fishing he fell into the water, sustaining a fracture of one of his lower limbs. He got along very well after a month, but almost immediately after falling into the water he began to complain of very distressing burning of one leg, which began in the foot and the leg and in the course of a few days extended up to the waist line on one side. This was controlled after a few days' treatment with iodin. He got along very well until about five weeks later, when he began to suffer from an extreme type of diarrhea. This continued in spite of treatment for eight months. In the meantime he had grown exceedingly anemic. This occurred when he was living in Southern Alabama and his physicians did not suspect hookworm disease. The man came to Florida and consulted me. He was in an emaciated condition, hemoglobin 20 per cent., constipated—symptoms of advanced anemia. After an examination I gave him 60 grains of thymol, securing only 20 or 30 worms. I waited a week and gave him 90 grains thymol, with better results. After a week I gave 90 grains more, and after another week I repeated the same dose. At the end of about six weeks he was practically well. He regained his strength and vitality. The point to be impressed is in connection with the infection: It appeared to me to be an acute infection of hookworms. From the time of his injury and to the date of infection, which probably took place when he fell into the water, and up until the date of the diarrhea, was probably sufficient time to allow the parasites to find their way into the intestinal tract with the consequent extreme diarrhea and anemia. I would like to know whether other physicians have observed patients suffering from hookworms with a similar sudden onset.

Dr. E. W. Warren, Palatka: I had an experience last summer which showed the frequency with which hookworm anemia and malaria are complicated. From June to September, 1909, in Palatka, we had a marked epidemic of malarial fever. Many of the cases became chronic, continuing throughout the summer and into the fall. Many yielded to malarial treatment, but a certain percentage of patients every week or two had chills. They could not work and their earning capacity was seriously affected. Finally, in November, one man who I suppose had suffered more than anyone else in my experience there, came to my office. He was very anemic, had had a chill that day, and it occurred to me that he might have hookworms. I secured a specimen of his feces and found it full of the ova. I immediately began to give him thymol, sixty grains once a week. I also gave him malarial treatment. He never had another chill after the first dose of thymol, which was administered the next morning after he called. He at once went to work and has not lost another day since that time. That was a new idea. Every chronic case of malarial fever which came into my office was examined for hookworms, and in practically every one I found the ova, and in every case as soon as I administered thymol the chills ceased. Of course, anti-malarial treatment was given too. In the case which Dr. Ross has reported an examination for malarial complication has impressed itself upon me as being a wise procedure.

(To be continued)

MISSISSIPPI STATE MEDICAL ASSOCIATION

Annual Meeting, held at Oxford, April 12, 1910
(Concluded from page 1569)

The Benefit to the Public Health by Report of all Specific Contagious Diseases to the State Board of Health

Dr. G. C. Phillips, Lexington: The government is spending large sums of money to teach improved systems of farming, improving waterways and other things, and it is of equal importance for it to look after the health of the people. With all other improvements, there can be no happiness without health. Each citizen cannot make laws for his own benefit and enforce them on his neighbor, no matter how negligent his neighbor may be about such things. Therefore, it is necessary that the government should make laws for all the people and have officers to enforce them. Yellow fever in Havana and the bubonic plague in San Francisco showed the inability of physicians to stamp out these diseases unaided by the United States Government. I advocate a department of health and a minister of health in the cabinet.

Our State Board of Health should have more money and authority to stamp out preventable diseases and to teach the people hygiene. A monthly report on vital statistics and prevailing diseases of the state should be issued by the secretary of the State Board of Health to show true conditions; if this were done it would encourage emigration, induce capital to come here and lower rates of life insurance. Outside people know these things only through newspapers. No official report can be obtained except from physicians all over the state. Each physician should report births, deaths and all preventable diseases in his practice—and be fined if he does not—on first of each week or month, to the county health officer and not to the secretary of the State Board of Health, and the county health officer should report to the secretary of the State Board of Health. The secretary of the state board should compile these reports and send them to the Marine-Hospital Service. If these rules were carried out the good accomplished in the preservation of lives and the time and money spent for sickness, would far exceed the cost of stamping out preventable diseases.

Prophylaxis of Venereal Disease

Dr. J. W. Young, Grenada, entered a plea for simple living and training in morals and modesty as a means of safeguarding the health of future wives and mothers.

Dr. H. C. Buck, Friar's Point, argued for education as the only true prophylaxis of venereal diseases.

DISCUSSION

Dr. M. J. Alexander, Tunica: Education has not been very successful along this line; young people do not appreciate the seriousness of venereal diseases. Gonorrhea is deemed by many men and women to be no worse than a cold. Even syphilis is not considered seriously by young men—they treat it as nothing. These youths suppose that their family physician can cure them in a few days when they are afflicted with gonorrhea, and that Hot Springs will cure them of syphilis. What can we do to relieve the situation? We speak of medical legislation; I think the effort in this direction should be made toward venereal diseases. If we would force health officers to publish the name of the disease and the names of those afflicted and put flags on the houses of those afflicted, in ten years there would be a big change.

Dr. H. L. Sutherland, Rosedale: This is a very difficult matter to get at with boys in a practical way without doing more harm than good. Many people have come to me asking that I speak to their boys on subjects of this nature, but I do not know how to do it without doing a great deal of harm. For several years past I have been giving literature to the boy instead. Whenever I want any literature on the prevention of venereal disease I write to the Indiana State Board of Health. Among these tracts that I have so obtained there is one that I am especially interested in. The title of the pamphlet, as I remember, is "Sexual Hygiene versus The Social Plagues." It is a splendid pamphlet on the subject and any boy can understand it. That is my way of educating the boy. The legislature of Mississippi ought to provide for literature of that sort intended for the people and not for physicians.

Dr. H. C. Buck, Friar's Point: I do not agree entirely with Dr. Sutherland in regard to not saying anything to boys; they must be reached in some manner; they are willing to learn and to follow advice. The seriousness of the matter must be impressed on them; they can be taught modesty; they should be taught the whole subject. It can be done.

The Nervous Manifestations of Pellagra

Dr. H. Boswell, Laurel, emphasized the importance of a study of the nervous manifestations in this disease as the only means of making an early diagnosis. Only patients in the late stages are seen in the hospitals but the man in practice who keeps his eyes open can often do much towards preventing the severe, late symptoms.

DISCUSSION

Dr. J. M. Buchanan, Meridian: I have seen cases in which there was practically nothing that pointed to pellagra except the nervous mental manifestations. We are told by the London school that we can make a diagnosis of pellagra without regard to the skin manifestations. That may probably be done by people who have been in contact with the disease longer than we have. The nervous manifestations result largely from the fact that the spinal cord is more or less involved. Different parts of the cord may be involved and the nervous manifestations would therefore show in different parts. We cannot say that there are any particular mental manifestations peculiar to pellagra. The most common, I would say, is depression—a form of melancholy in which the patients sit with heads bowed and take no interest in anything around them. It is more than probable that the physicians practicing throughout the state see more of the first stages of the disease than those who are in the hospitals because the physician usually treats the patient at home as long as he can before sending him to the hospital for treatment.

Dr. G. W. Stephens, Meridian: I have noticed the depression spoken of by Dr. Buchanan; in the later stages of the disease it is remarkably manifested. In one case, however, a woman died of the disease in a very happy state of mind. One of my first cases was a man whose skin was marked, a pronounced case. To-day he is cured.

The Uterus: A Knowledge of its Anatomy and Physiology Essential to Successful Gynecologic Effort

Dr. T. M. Jones, Hernando, emphasized the necessity of a thorough knowledge of the anatomy and physiology of the uterus as a *sine qua non* to the would-be gynecologist and described in detail those points of most importance.

The Physician's Duty in Prophylactic Gynecology

Dr. S. E. Eason, New Albany, laid stress on the importance of the obstetrician doing his full duty in the way of preventing sepsis and lacerations and the necessity for prompt repair of the latter. He also paid his respects to the physician who turns loose the uncured male gonorrheic to commit matrimony and increase the practice of the gynecologist.

Obstacles in the Surgical Treatment of Gynecologic Patients

Dr. H. N. Page, University, discussed the dissatisfaction with the results of gynecologic operations prevalent throughout the country. The physician and the surgeon both share the responsibility. Many of the conditions that call for surgery are of a chronic type—these cannot be cured all in a moment, other tissues than those cut are apt to be involved and it may take time to cure them. Preparatory and after-treatment are both too often neglected. Bad sexual hygiene, after operation, is responsible for much trouble. Operations are frequently delayed too long. The operator may be lacking in surgical judgment, which is one of the rarest qualities in a surgeon. The surgeon and the physician should consult frequently during the after-care of the patient.

DISCUSSION

Dr. J. A. Crisler, Memphis: Dr. Page's paper goes to the bottom of the matter in calling attention to the fact that there should be a strong bond of union between the physician and the gynecologist in the treatment of these cases. Surgery is sometimes credited with things it cannot do. The curette is a most dangerous instrument. I have seen many bad results arising from its use. There is a great difference between the surgeon and the operator. Surgical judgment is a thing that must be cultivated.

SYMPOSIUM ON MICROSCOPY

Use of the Microscope by the General Practitioner

Dr. J. G. Gaither, Oxford, contended that the microscope is as essential for daily work as the stethoscope or the thermometer. He considered some diseases and methods of examination for their correct diagnosis.

Dr. J. M. Furr, Aberdeen, described the blood picture in several conditions encountered in general practice.

Dr. T. M. Jones, Hernando, discussed various theories of life and the dangers into which we may be led by following these so far that we may forget our Creator.

Discussion on Microscopy in General Practice

Dr. G. W. Stephens, Meridian: I believe that the majority of general practitioners lack the time necessary for this work. The microscopy of blood would take too much time for the general practitioner.

Dr. E. L. Green, Carpenter: These examinations take too much time from the general practitioner, and it is better to send the specimens to specialists. On the other hand, it is a very good thing for the physican who has time to do such work.

Dr. B. H. Durley, Aberdeen: I do not find that it takes much time to do the work, and in any event time should not be considered. Every physican should use the microscope. If the physician does not know how to use it he should take a course in microscopy and learn how.

Dr. E. L. Robertson, Sunflower: The physician should take time. It takes only a few minutes to make an ordinary microscopic examination.

Dr. J. G. Gaither, Oxford: I am a country doctor and do not claim to do the work of a specialist. I leave special work to the specialist, but I can make a slide of any case mentioned in my paper, except for hookworm infection, in from 5 to 12 minutes. Those slides can be examined at leisure. If I am in doubt, as I frequently am, I call on a specialist to help me out.

Vital Statistics

Dr. J. W. Gray, Clarksdale, gave some reasons for keeping vital statistics accurately. In any court in Mississippi it would be far easier to make legal proof of the birth and death of Farmer Smith's well-bred jackass than of the birth and death of our illustrious and beloved Lamar. Under our present laws the pure blood of a registered bull can be more readily proved than a man's legitimacy.

Dr. E. L. Green, Carpenter, considered the relation of vital statistics to sanitary measures.

Dr. C. L. Wilbur, of the U. S. Bureau of the Census, Washington, D. C., told of work done along these lines in other states and described the methods that have given best results.

DISCUSSION

Dr. H. L. Sutherland, Rosedale: I have applied to some of the large and pretentious cities of the state, but they were unable to supply statistics of this nature. The health officer should require such data. I have found that these statistics had much to do with immigration. It is to be regretted that the vital statistics bill failed to pass in the legislature, but we can do a great deal of educational work along these lines and when the legislature meets again we ought to get a satisfactory bill of this sort passed. If we keep up an educational campaign of this nature we will eventually convince people of the importance of the measure.

Dr. J. J. Haralson, Forest, by way of discussion, read the following resolution:

> *Resolved*, That the achievement of the registration of all deaths, with their causes, immediately after their occurrence, and the prompt return of certificates of death from local registrars directly to the central bureau of vital statistics which shall constitute a part of the organization of the State Board of Health, thereby giving the sanitary authorities of the state timely information of the exact prevalence and distribution of disease, is the most important of all sanitary measures and should be unremittingly urged until successfully carried out in this state.

The State's Care of the Tuberculous Poor

Dr. J. R. Tackett, Meridian, urged the importance of the state providing for the care of indigent consumptives. Mississippi is generous to her established eleemosynary institutions and an effort should be made in this direction also.

Uncinariasis

Dr. C. W. Stiles, Washington, D. C., gave a lecture on hookworm; its method of infection, prophylaxis, etc.

Sources of Hookworm Infection and the Manner in Which the Infection Takes Place

Dr. C. C. Bass, New Orleans: Different species of hookworms have been found parasitic in different animals. Only two species infect man—*Ankylostoma duodenale* and *Uncinaria americana*. The sources and manner of infection is the same in each. The worms live in the small intestine where they lay eggs which pass out mixed with feces. Under favorable circumstances of moisture, temperature, and shade the eggs hatch out larvæ in 24 hours. Hatching does not occur in the intestinal canal. In about 2 days the larvæ shed their skin somewhat as snakes do, and anatomic changes occur. In 4 or 5 days another such change occurs and the animal becomes capable of infecting man. The organisms may live in this stage many months without food, requiring only moisture. Freezing kills them. In 1898 Loass accidentally soiled his hands with culture of encysted larvæ, and finding ova in his stools concluded that he had been infected through the skin. Later he proved conclusively the correctness of his theory by placing larvæ on the arm of a man not then infected. After a few hours an itching papular eruption, later becoming vesicular, and still later pustular. These skin lesions that were exactly like ground-itch got well in 10 or 12 days. He also infected dogs with larvæ of the dog hookworm and demonstrated the larvæ in the skin, blood vessels, lymphatics, heart, lungs, trachea, and intestinal canal. Bentley (1902) found a larva which he took to be hookworm in a water sore or ground itch. He then infected a man and found ova in the stools in 7 or 8 weeks. These experiments with *Ankylostoma duodenale* have been paralelled and found to hold good for *Uncinaria americana* by Claude A. Smith of Atlanta, Ga., and others in this country.

I wish to put on record the following experiment: A culture of encysted *Uncinaria americana* in a mixture of charcoal and feces was applied to one side of the arm part of a lady's kid glove which had previously been thoroughly soaked in sterile water. A part was selected free from seams or apparent holes. On the other side a small lump of mud of sterile soil and sterile water. Three hours afterward this was removed—and after long search four living larvæ and two dead ones were found. If larvæ pass through leather experimentally, it is probable that they do this practically; and this infection may occur from getting infected mud on wet shoes. This would explain the cases of hookworm disease in those who have not had typical ground-itch. The course of the worms through the skin is as follows: The larvæ enter the skin chiefly through the hair follicles and sweat pores, enter the capillary blood vessels and the blood stream, pass through the right heart to the lungs, into the bronchi, thence to the mouth, and may be swallowed, pass through the stomach to the small intestine, where they attach themselves to the mucous membrane and develop to adult life. They may live several years, laying enormous numbers of eggs which pass out with the feces of the patient.

Vasectomy: The Surgeon's Part in the Treatment and Prevention of Criminals and Defectives

Dr. M. O. Shivers, Greenville: No condition of so grave import has received so little consideration at the hands of the general practitioner as degeneracy and criminology, and their treatment. It will be through the education of the medical profession as a whole that this important advance in the control of crime and degeneration will be made. The surgical aspect of vasectomy presents little for consideration other than that it is easy of performance and has no serious consequence. The operation in the female is more difficult, but the oviducts may be reached and ligated through a median incision, or anterior colpotomy, the former being the easier, the latter the less dangerous. That criminals and degenerates are on the increase is evidenced by the enormous increase in the expense of state institutions and the multiplicity of the occupants. It is not uncommon for men and women to return to the asylums after a few years stay at home, during which time children were born to them. The three measures whereby procreation may be prevented are segregation, sterilization and prohibitive marriage. Sterilization by vasectomy is easiest, safest and most practicable with no restrictions or punishment attached thereto. Vasectomy is a rational measure in that it does in a few minutes what Nature accomplishes in generations with idiots and imbeciles; namely sterilization.

DISCUSSION

Dr. P. M. Kimbrough, Morgan City: The State Board of Health ought to have supervision of this matter.

Dr. H. R. Shands, Jackson: What is the legal status of this matter? I consider it an advance in the care of criminals and insane, and the members of the Mississippi Medical Association should do what they can to look into the matter.

Dr. C. Kendrick, Kendrick: Every physician knows that something ought to be done along the lines suggested. I am sure there is nothing in the constitution of the state that will conflict with it and am of the opinion that the matter should be brought before the legislature at the next session. Every physician knows parents who ought not beget children. I know of cases in which patients returned from the asylum apparently cured and begot children who of course inherited the infirmity. I believe that those afflicted with insanity, confirmed drunkards, and habitual criminals should be compelled to undergo the operation. I have always favored a law of this sort and in my graduating thesis in 1873 I advocated a measure of this kind, although I then knew nothing about this method of doing it. What effect would there be 8 or 10 years after the operation; has the operation been tried long enough?

Dr. John Y. Murry, Ripley: Something of this sort should have been done long before now. The method is in use in the State of Indiana. Physicans should tell the press about such matters and it would take the subject up and educate the people.

Dr. H. H. Haralson, Vicksburg: Dr. Shivers' paper should be referred to the standing legislative committee.

Dr. M. O. Shivers, Greenville: The public seems to think that castration and ovariotomy are too severe to be used in the prevention of insanity, but it is really what the people need. It would not be a very difficult matter to have a law along these lines passed by the Mississippi legislature, especially since other states have adopted it. I think it best to begin with the insane and habitual criminals and to carry it further later. There have been no bad results from the operation performed 10 years ago.

Case of Ruptured Pyosalpinx Causing Diffuse Peritonitis

Dr. H. R. Shands, Jackson, gave the reasons for the rarity of this accident and reported the case of a patient who recovered after two operations: one for drainage, the other for the removal of the uterine adnexa.

DISCUSSION

Dr. J. W. Barksdale, Vaiden: It is not long since progressive peritonitis was considered beyond relief, but now we no longer feel that we are going up against a hopeless proposition. In many of these cases we owe the saving of the life to the character of the pus contained in the tube. Careful attention to every detail in these cases will insure success.

Dr. J. G. Gaither, Oxford: I advise the introduction of normal salt solution in the rectum. The Fowler position will prevent much postoperative nausea which is dangerous.

Dr. M. O. Shivers, Greenville: There is too much peritonitis; it reflects on the surgeon and on the physician who failed to recognize the condition. This is another instance of the necessity of a strong and close connection between the physician and the surgeon.

Dr. H. R. Shands, Jackson: In some of my cases I was very much surprised to see recovery ensue. I think it best to drain through the vagina when that is possible. I have looked on this as a life-saving operation.

Perineal Prostatectomy

Dr. J. W. Barksdale, Vaiden, described the anatomy of the field, the operation, the after-treatment and the effect of the operation on the sexual function. Until the past year he has preferred the suprapubic route, but now considers the perineal preferable from simplicity of operative procedure, dependent drainage and freedom from complications.

DISCUSSION

Dr. J. Darrington, Yazoo City: I know of no operation that adds more to the relief of human suffering than this operation performed on old men. Life is a misery and any operation that gives relief is worthy of consideration. Nearly all of the bladders are septic, and we must get them in good condition. We should get the patient out of bed as soon as possible.

Dr. J. W. Barksdale: The operation ought to be uniformly successful in selected cases, but, unfortunately, we cannot always select our cases.

Non-Operative Treatment of Fractured Femur

Dr. J. P. Wall, Jackson, described the method of treating fractures of the femur used in Bellevue Hospital, New York.

DISCUSSION

Dr. J. W. Barksdale, Vaiden: How is the patient put in a sitting posture in these cases?

Dr. J. C. Gaither, Oxford, said that the general practitioner should have plenty of bandages on hand in these cases, no less than 35 or 40 2½-inch bandages, and should be sure to have bandages thick enough. He said that it was very tiresome to the assistant who holds the leg, while someone else performs the operation, and described a mechanical arrangement which he had seen used for this purpose, which facilitated the work considerably.

Dr. H. R. Shands, Jackson: Fracture of the femur is most difficult to deal with. I have had considerable trouble with this sort of fracture. There is rarely an anatomic reduction.

Dr. J. P. Wall: In Bellevue Hospital two strong men hold the leg during the operation. If the patient cannot sit up straight, put him in a semirecumbent position. I advise against putting on a very thick cast; 35 bandanges are too many. The cast should be made snug without being too tight. That is the Bellevue Hospital treatment and it gives excellent results.

Defects in Our School System

Dr. H. Flowers, Brookhaven: The idea expressed in the phrase *mens sana in corpore sano* should be the basic principle in all educational methods. Defective vision, diseased tonsils and adenoids play no mean parts as causative factors of idleness and dulness. Infectious diseases are considered too lightly. Sufficient play-grounds are rare.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS

Eighth Triennial Session, held in Washington, D. C., May 3-4, 1910

The President, Dr. Edward L. Trudeau, Saranac Lake, New York, in the Chair

ARTIFICIAL IMMUNIZATION

Formation of Antibodies

Dr. Ludwig Hektoen, Chicago, who was to have read a paper on this subject, was unavoidably absent, but his paper was read by Dr. William H. Carmalt, secretary of the congress.

Any substance capable of inciting the formation of antibodies is an antigen. Microbes and various microbic derivatives, toxins, red blood corpuscles and other cells, as well as serum, constitute or contain the most important antigens, which appear to be colloid proteins, and the antibodies which concern us most are antitoxins, lysins, agglutinins and opsonins. The paper then took up the simple-body curve; gave illustrations of the antibody curve; referred to the significance of the antibody curve, the effect of quantity and mode of introduction of antigen on the production of antibodies, and the formation of different antibodies for the same cell.

The paper then discussed multiple immunization, referring to the influence of wholly distinct antigens on the production of the corresponding antibodies. In regard to the antibody formation in infectious diseases it was stated that in acute bacterial diseases the course of the antibodies in the typical attack resembles altogether that of the antibody curve after a single injection of antigen in a normal animal. This has been found to hold good for the pneumococco-opsonin in pneumonia, for the streptococco-opsonin in erysipelas, for diphtherio-opsonin in diphtheria, and also for the diplococcus of Laveran in mumps. In acute articular rheumatism the opsonin for micrococcus rheumaticus and streptococcus describe the same course; as new joints become involved the index sinks below normal, and on improvement it rises above normal. In forms of acute otitis in which pseudo-diphtheria bacilli are dominant the opsonic index for these bacilli may cover a wide range, the changes often corresponding to changes in the clinical symptoms. In these diseases the opsonin is the only antibody for the bacteria in question that under present circumstances permits of ready measurement. During the early stages there is a fall in the specific opsonin in the blood; as the symptoms begin to subside the curve rises, suggesting that more antibody is being liberated than is neutralized by the pathogenic substance. The curve usually reaches the highest point a day or two after the acme of the symptoms and then in many cases it falls rather abruptly. The curve is readily affected by complications, at the onset of which it usually falls. In rapidly fatal cases, *e. g.*, pneumonia, the curve may not return from the primary fall but sink lower and lower. The characteristic course of the streptococco-opsonin in scarlet fever indicates that the streptococcus plays an important part in this disease whether it be regarded as the primary cause or not. Most of the measurements on the basis of which the foregoing statements are ventured have been made by means of Wright's method. In reply to objections to the reliability of this method it may be pointed out that the results obtained in different diseases and in different cases of the same disease appear consistent; that in scarlet fever, diphtheria and pneumonia, independent observers have reported similar results; and, finally, that the dilution method, whenever used, has given results that compare closely with those given by determinations of the index. The conditions appear more complicated in cholera, dysentery and typhoid fever in which it is possible to follow the course of at least three antibodies. The agglutinin formation in typhoid in most cases begins in the first or the early part of the second week of the disease and the maximum is usually reached in the third week.

Relation of Anaphylaxis to Immunization

Dr. Frederick P. Gay, Boston: The great interest in anaphylaxis lies in its close association to phenomena of increased resistance or immunity, and the question of greatest ultimate interest is the exact relation between anaphylaxis and immunity. The greatest advance in recent years in immunity has been due to the study of conditions of resistance which occur following the injection of harmless protein substances like red blood cells, rather than the studies in immunity to bacteria. It is found also that the greatest advances in knowledge of anaphylaxis have been obtained by studying anaphylaxis to non-toxic proteins. The study of anaphylaxis to non-toxic proteins, such as blood serum and egg-white, has shown us that the processes vary markedly in accordance with the animal species chosen for treatment. In the guinea-pig, anaphylactic shock, which is produced on the second injection of a given protein substance, would seem to depend on an intracellular reaction between the antigenic serum and sessile precipitins which have been formed in the cells following the first injection. This reaction is accompanied by a disappearance of the reactivating alexin (complement) from the blood. In rabbits the intensity of the anaphylactic shock would also seem to run parallel to the formation of precipitins in the circulation. The shock itself is due to separation of some toxic substance from this precipitin reaction as it occurs in the circulating blood, and the effect on the cells is secondary rather than primary, as is the case in guinea-pigs. Although the first accurate description of anaphylaxis was given by Richet while working with certain toxins from shell-fish, there is no absolute proof from his experiments that the anaphylaxis was produced to the toxins as such. More recent work, both with animal toxins and with the soluble toxins of bacteria, would lead us to think that the rare conditions of anaphylaxis which occur following injections of these substances are due rather to anaphylaxis to the protein substances which accompany the toxins than to the toxins themselves. Thus, in the tuberculin reaction, we may assume that the reaction is due to anaphylaxis to the products of the bacterial bodies of the tubercle bacillus rather than to anaphylaxis to the toxin of the tubercle bacillus. The phenomena of anaphylactic shock in animals sensitized to bacteria would seem to be due to a rapid liberation of the endotoxins of the bacteria brought about, probably, by the lysins which are formed following the sensitizing injection. In considering the data as to the relation of anaphylaxis to active immunity, two questions of importance arise: First, of what value is the condition of anaphylaxis to the host? The condition is of obvious disadvantage if fatal intoxication occurs on anaphylactic shock, but although such conditions occur experimentally, it is not certain how frequently they are brought about under natural conditions. Other disadvantages have been indicated. Thus non-specific sensitivity of sensitized animals to intoxication by salt solution has been noted and similar conditions may be evidenced in ways of which we are not aware at present. The supposed advantage of anaphylactic shock is attributed to rapid formation of solid immunity following such violent reaction. In addition, certain disadvantages follow even non-fatal anaphylactic shock. The animal is found to be more subject to other infections due possibly to disappearance of alexin which accompanies the shock. The sudden disappearance of the lysins, the action of which causes the shock itself, may also be of extreme, although temporary, disadvantage in protecting the animal against the virus which has been introduced in causing shock. The conclusion then is drawn that not only is it unproved that a condition of anaphylaxis is of value to the individual, but that there is strong evidence for believing that the condition as such is of distinct disadvantage to the host.

This leads to the second question: Are the conditions of immunity and anaphylaxis inseparable? The possibility of such a separation has been suggested. It has been shown repeatedly that the condition of anaphylaxis may be transferred from a sensitive animal to a normal animal by means of the blood serum. The transfer of this condition requires a definite period of incubation which seems to indicate that the mechanism of transfer is not exactly the same as in the transfer of immune properties of serum. In transferring immunity to bacteria by antibacterial sera we may also transfer a sensitization to the bacteria themselves, and the same questions arise in relation to the passive transfer of anaphylaxis which confront us in considering the condition of active anaphylaxis. The disadvantage to the recipient of serum, if there is a disadvantage, will be the same as the advantage in the originally sensitized animal. The suggestion is offered that the notorious inefficiency of the majority of the antibacterial sera, both for prophylactic and curative purposes, may be due in some way to the transfer to the patients of anaphylaxis or lytic bodies rather than immunity or coagulating antibodies, and the possibility of producing pure coagulating antibacterial sera is worthy of investigation. In addition, we have to consider the possible danger of producing anaphylaxis to the serum itself which contains the bacterial antibodies. In treatment by serum of an immunized animal of an alien species, which is obviously necessary in the treatment of human beings, the possibility of sensitizing to the proteins of the alien serum is of importance. This danger has been emphasized by v. Pirquet and Schick, who have described the generalized, accelerated reaction which may follow repeated doses of antitoxin in human beings. The symptoms produced on second injection of horse serum in human beings may be similar. The local reaction with serum such as the one which occurs on repeated injections of horse serum in a rabbit (Arthus' phenomenon) occurs more frequently in human beings than the generalized guinea-pig reaction, as has been shown by Lucas and Gay.

Artificial Immunization in Non-Bacterial Diseases

Dr. S. P. Beebe, New York: In recent investigations respecting anaphylaxis, the reactions of the organism to proteins of non-bacterial origin have been studied and the conclusions reached afford a sounder theoretical basis for our understanding of infections. At present we have investigations on malignant tumors in mice, rats, dogs and rabbits, all of which agree in what appear to be certain fundamental principles in cancer immunity. The first of these principles is that a varying percentage of animals is normally immune to the tumor. For what reason we do not know. In some instances apparently it is related to the external physiologic surroundings, such as climate, food and water supply, and in other instances to the inherent character of the tissues in which the tumor is planted. The second principle is that a varying percentage of successfully planted animals recover spontaneously, the number depending on the virulence of the tumor and the resistance of the animal. We have found means to increase the virulence of the tumor, the most successful of which are as follows: (1) growing the tumor in particularly susceptible animals; (2) selecting carefully those tumors which give the highest percentage of takes; (3) preliminary heating of the tumor in an optimum temperature; (4) selecting the most suitable location for the implantation—the axilla has been found better than the dorsal region; (5) selecting the older tumors in preference to the young; (6) implantation from the metastases instead of the original tumor. The resistance of the animal, likewise, may be modified by various procedures, the most important of which are: 1. Making the first plants from avirulent tumors and using the immunity thus awakened to combat the more virulent strains later. 2. Subjecting the grafts before implantation to the effect of recovered immune serum. 3. Implantation of small amounts of tumors; animals may resist a small dose and the immune forces thereby be stimulated to the resistance of a larger amount. 4. Preliminary infection of embryonic tissue, various organ tissue or even the blood of the homologous species. The third principle is that the recovered animal is immune for a long time to further implantation of tumors of like virulence, and as a consequence of this principle the highest degree of immunity with which we are familiar occurs in those animals which have grown a virulent tumor and have spontaneously recovered therefrom aided, perhaps, by some one of the various methods under our control.

Immunity to tumors is not to any considerable extent a serum immunity, inasmuch as the usual methods of demonstrating immune factors by serum reactions have in most instances been negative. Clowes, however, found that serum from a recovered animal had a deleterious effect on tumor cells, preventing their growth in a considerable percentage of cases on subsequent transplantation. In a paper published by Crile and myself it was shown that transfusion of large quantities of recovered blood to an animal with actively growing tumors would cause complete absorption of the latter with the usual subsequent immunity to further implantation. More recently, I have carried out a further series of transfusion experiments in which I found unmistakable evidence that the regression of the tumor is an essential factor for the future immunization of the animal, and that transfusion of immune blood into an animal susceptible to the tumor but free of tumors at the time of the transfusion does not confer immunity for subsequent implantation. There apparently must be some interaction between the serum and tumor by which the regression is started, the immune forces of the animal thereby awakened and future protection assured. It is not necessary for the animal to have large tumors at the time of the transfusion or that time should be allowed for their complete absorption in order to show immunity.

At present the method which appears to be available for immunizing an animal with already growing tumors is by repeated subsequent implantations of tumors. Gay has modified this procedure by obtaining complete absorption of the first tumor by the subsequent transplantation of only one graft, provided it was done before the development of metastases. Similar observations have been made by Van Dungern and Coca working with the transplantable sarcoma of hares. It would seem from the results of these experiments that a method of vaccination is a logical procedure in the treatment of malignant tumors, but it must be observed that efforts to accomplish the same results with tumor extracts, or with tumor cells killed by heat or chloroform, or other physical means, have not served to stimulate the development of the immunity. Nothing short of the living tumor cells is capable of having such an effect.

The interest which all cancer investigators have had in these experiments on cancer immunity has been greatly stimulated by the recent observations of Hodenpyl. He was fortunate in having under his observation a human patient with carcinoma who showed remarkable spontaneous regression of a far-advanced tumor, the tumor being primary in the breast, with extensive metastases in the liver. The regressive processes were accompanied by the production of chylous ascitic fluid, an observation quite in harmony with that published by Mackay (*Brit. Med. Journal*, July 20, 1907). The difference is that in this latter instance the recovery was ushered in by the production and absorption of a pleural exudate. The chylous ascitic fluid obtained by Hodenpyl has been injected subcutaneously and intravenously in a number of patients with favorable therapeutic effects in many instances.

Discussion on Anaphylaxis and Immunity

Dr. J. George Adami, Montreal: With regard to immunization against disease, let us take the ordinary cases of malignant streptococcus endocarditis. In that condition there is a bacteriemia. The fact that the cusps of the heart valves are involved shows that streptococci have been circulating in the blood and have affected this particular organ. One knows also from clinical experience that in these cases he can make cultures from the blood and get fairly frequent growths of streptococci out of the blood taken from the body during the course of the disease. The spleen is an organ peculiarly situated so as to filter off bacteria circulating in the blood. The nature of the splenic anatomy is such that the bacteria must be arrested. The bacteria are in the blood, but it is rare that one gets an abscess or a severe suppurative condition of the spleen. It is frequent enough to get an infarct, or simple necrotic processes, and one finds that the spleen has been or is the point of election for these. There is natural destruction of bacteria going on in the spleen. It affects various bacteria which one may choose for the purpose of inoculation. The same is true with regard to the muscles. How rarely, with any form of bacterium, do we find abscesses occurring in the muscles? In all organs that are highly developed and have a fine capillary circulation the bacteria must be arrested in the blood, and we find no signs of infection. The ordinary habit of the endothelium lining the vessels of these tissues is to destroy bacteria. In other words, there is a definite, nonspecific immunity on the part of these cells.

Dr. Alfred Stengel, Philadelphia: The question arises whether in all our attempts at bacterial immunity we are always following logical lines. Particularly am I impressed with the fact that the newer method of vaccination immunization is being pushed very actively in certain directions which may be surrounded by grave dangers. From my experience in cases of chronic endocarditis I can say that not only has vaccination done no good, but in the cases I have seen, it has done positive harm, and that is the experience of Dr. Billings and Dr. Rosenau, of Chicago, in other general bacteriemias, as pneumonia, etc., in which other results might be expected. As practical clinicians, we should take to heart in the use of these treatments the most cautious dosage before we proceed with any ambitious attempt at obtaining quick results. From the view of the clinician, I feel that we can express a high sense of satisfaction at the work that has been done by some of our men in this country along the lines indicated.

Dr. Leo. Loeb, Buffalo, N. Y.: It seems to me that Dr. Beebe has proved beyond doubt that the different cell constituents of different organs are specific, and previous observations with cytolysis point to the same conclusion. Dr. Beebe's experience regarding the action of nucleoproteins is of great importance not only in regard to immunity, but for the interpretation of ferment action. He shows that the heating of nucleoproteins entirely destroys the characteristic of ferment action, and that seems an hypothesis frequently given expression, namely, that ferments are nucleoproteins. Another fact which coincides with the conclusions of Dr. Beebe is this: we know that the characteristics of the father are transmitted to the children by the spermatozoa, and that the spermatozoa consist mainly of nucleoproteins and allied substances. It agrees with Dr. Beebe's results that the nucleoproteins are the carriers of the specific characteristics. I am not inclined to believe that only nucleoproteins have that character, but that other proteins may have it to a less extent.

Regarding tumor growth, it is possible in mice to produce immunity against tumor growth, whether it be liver or spleen, by the introduction of red blood corpuscles. They do not grow after injection. On the other hand, we can immunize with heated tumor material which is of decreased virulence on account of the condition that the tumor material is grown for some time. These facts seem to be contradictory. Again, there is no doubt that pregnancy favors the growth of tumors under certain conditions. Clinicians have made that observation and experimental observers have had the same experience. On the other hand, in certain conditions pregnancy inhibits the growth of tumors. In accordance with relatively slight changes a great difference in results may be obtained. We have never been able to produce experimentally by inoculation of tumor material active sera with which we can cure cancer. Under certain conditions antibodies are produced in the case of tumor growth. Why is it not possible for us to show experimentally in most cases the presence of such antibodies? I believe the condition is similar to that prevailing in certain cases of internal secretion. In certain cases we can prove the presence of internal secretions by the injection of extracts of organs producing that internal secretion or by injecting blood serum. Probably certain antibodies are produced continuously in small quantities and rapidly removed from the body, and thus give no tumor growth, and we cannot make use of passive immunity. But we have much better prospects for using active immunization in cancer growth in the near future, and I feel that marked progress will be made by that means of immunization.

Value of Optimism in Medicine

Dr. Edward L. Trudeau, Saranac Lake, N. Y.: Optimism is a product of a man's heart rather than of his head; of his emotions rather than of his reason; and on that account is rather frowned on by physicians whose scientific training naturally leads them to depend entirely on the qualities of the intellect and look with suspicion on any product of the emotions. Optimism is a prominent factor in anything a man may achieve in life. It is a mixture of faith and imagination, and from it springs the vision which leads him from the beaten paths, urges him to effort when obstacles block the way, and carries him finally to achievement, where pessimism can only see failure ahead. Optimism means energy, hardships and achievement; pessimism, apathy, ease and inaction. Optimism may and often does point to a road that is hard to travel, or to one that leads nowhere; but pessimism points to no road at all. The doctor, whether he be a scientist and his life wholly given to scientific investigation in a laboratory, where reason and intellect reign supreme, or whether he be wholly a practicing physician and surgeon in daily contact with suffering humanity in its struggle with disease, will need all the optimism he can cultivate if his life is to be as fruitful in results as it can be made. The practicing physician must have optimism if he is to develop a full degree of efficiency in meeting the terrible emergencies of acute illnesses and accidents or the long-drawn-out struggle with lingering and hopeless disease and at the same time inspire his patients with a degree of optimism which means everything to them in the ordeals they have to pass through. Ian Maclaren's optimism was of this kind, and Dr. Grenfell's optimism is every day helping him to heal, not only the sick bodies, but the broken spirits of men as well. This is the highest type of optimism the doctor may attain to, as its influence may reach not only to the physical, the intellectual and the psychical, but even to that dim ethereal region of the spiritual, from which springs man's most sacred and cherished aspirations. Perhaps the most brilliant and striking examples in our time of the value of optimism, each representing one of the two extremes of the medical profession, that is, experimental science, and practical medicine and surgery, are Pasteur and Grenfell. Optimism is the one thing that is within the reach of us all, no matter how meager our intellectual equipment, how unpromising our outlook at the start, or how obscure and limited our careers may be. In a long life which has been lived daily in contact with patients beyond the reach of human skill, who through months and years of hopeless illness looked to me for help, I have indeed had need for all the optimism I could cling to. It has ever been a precious asset to me, and I hope to those about me as well, and has never entirely failed me. Let us not, therefore, quench the faith nor turn from the vision which, whether we own it or not, we carry, as Stevenson's lantern bearers their lanterns, hidden from the outer world, and thus inspired many will reach the goal; and if for most of us our achievements inevitably must fall far short of our ideals; if when age and infirmity overtake us "we come not within sight of the castles of our dreams," nevertheless all will be well with us, for, as Stevenson tells us rightly, "to travel hopefully is better than to arrive, and the true success is in labor."

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

One Hundred and Twelfth Annual Meeting, held at Baltimore, April 26-28, 1910

The President, Dr. G. Milton Linthicum, in the Chair

Officers Elected

The officers elected were given in The Journal, May 7, p. 1551.

The House of Delegates adopted resolutions endorsing Senator Owen's bill for the creation of a national department of health.

President's Address: Some Public Health Problems

This will appear in full in The Journal.

Prevention of Racial Deterioration and Degeneracy, Especially by Denying the Privilege of Parenthood to the Manifestly Unfit

Dr. Lewellys F. Barker, Baltimore: The class of people to which I refer includes the insane, the imbecile and feeble-minded, the chronic inebriates, the criminal classes, the habitual vagrants, the permanent pauper class, the congenital deaf and dumb and the sexual perverts. In every state there is a relatively large number of people who come under some one of these headings. Many, fortunately, are segregated, but many are outside of institutions, and even those who spend some time in institutional life have periods of liberty. There are no less than 3,700 insane persons under care in Maryland at the present time. In the Maryland Asylum and Training School for the Feeble-Minded there are 305 idiotic, imbecile, feeble-minded and epileptic children, and there is a waiting list of 200. To these, 48 families have contributed from 2 to 4 individuals each. It is safe to assume that there are at least 2,000 defective children in the state, not including the so-called backward or exceptional children. In the Maryland Penitentiary 1,102 persons are incarcerated, in the House of Correction 570, and in the City Jail 579. A large proportion of the children who are arrested and brought into the Juvenile Court came from homes in which the parents are abnormal. During 1909, no less than 2,562 children under 16 years of age were so arrested in this city. The large number of paupers in the state is indicated by the fact that there are on the average between 1,300 and 1,400 people constantly at the Bay View Almshouse, some tuberculous, some insane, but mostly inefficient, intemperate ne'er-do-weels. According to Dr. Dana, the cost of the care of the insane and feeble-minded in this country is $85,000,000 and is increasing absolutely at the rate of 4 per cent. As to the causes of this dreadful burden of degeneracy, two main sets of influences are at work; first, those of environment; second, those of heredity. Most attention has been paid to the first of these. Very little attention is paid to the important matter of parenthood. Of the various methods which have been suggested for limiting the procreation of the unfit, the only ones likely to receive any large public endorsement in the present state of society are (1) permanent segregation, or (2) some form of surgical sterilization. Permanent segregation of all members of the class we are considering is practically impossible, and if it were possible it would cost an enormous sum. Surgical sterilization in the form of castration will probably never meet with widespread approval. Whether or not surgical sterilization in the form of Rentoul's operation of vasectomy in the male and salpingectomy in the female will become popular remains to be seen. Belfield of Chicago, writing of vasectomy, says: "It is an office operation—it is less serious than the extraction of a tooth." The Indiana legislature in March, 1907, passed a bill authorizing the sterilization of "confirmed criminals, idiots, imbeciles, and rapists" in the state institutions of Indiana; since then more than 800 convicts have been sterilized; in more than 200 of these the operation was done at their own request. At the present, I prefer not to make any specific recommendations; the important thing for us to do, it seems to me, is to take the whole matter of race improvement under consideration, to inform ourselves and the citizens of Maryland of the conditions which prevail and to try to find out the best methods of improving them. "A good tree cannot bring forth evil fruit; neither can a corrupt tree bring forth good fruit."

General Professional Responsibilities for Preventing Blindness

Dr. Hiram Woods, Baltimore: Two bills were passed by the Maryland legislature, just adjourned, which have important bearings on the prevention of blindness and the preservation of eye health. One, the Midwifery Bill, received executive approval. The other, the Optometry Bill, did not. The enactment of the first puts on the profession certain duties; the veto of the second saves it from dangerous encroachment on the medical practice law. Having proved to the legislature and the governor the ignorance of the midwife, we are now confronted with the duty of providing means for her training. In this training must be included instruction in the prevention of ophthalmia neonatorum. An appalling loss of sight persists from a disease both preventable and curable. Credé's prophylaxis, modified to the extent of substituting a 1 per cent. for a 2 per cent. solution of silver nitrate, is in general use in the maternities, and the disease is all but abolished in these institutions. The conclusion seems irresistible that midwives are responsible for most cases of this form of blindness and physicians for the remainder. As for the Optometry Bill, there is abundant evidence that many members of our profession did not know what it meant. On its face, it looks like an advance in protecting the public; but certain things led the oculists to study the bill closely. We know, in the first place, that many serious eye troubles often manifest themselves through discomfort in work, or apparent changes in refraction, and that correction of the apparent error does not reach the real trouble. The bill required the governor to appoint a board of five examiners, from persons previously engaged in the practice of optometry. This board was given absolute freedom in selecting the subjects in which future business rivals were to stand examination. The optometrist was not to use drugs, even though the diagnosis of serious eye lesions is frequently impossible without mydriasis. Oculists are teaching internists many early signs of systemic disease, some of which are functional. On the other hand, oculists are learning from general pathology much hiterto unknown about the causation of eye lesions. If the optician, with his new name, has his way, ophthalmology will be given a more "popular" name, and all save what the tradesman thinks essential will be eliminated from the course of instruction.

Intestinal Perforation in Typhoid Fever

Dr. Charles Bagley, Jr., Baltimore: This lesion has not received the attention and study which it deserves. In 1903, Harte and Ashhurst were able to collect only 362 cases of typhoid perforation in which operation had been performed, with a mortality of 74.03 per cent. I have made a similar search of the literature from Oct. 1, 1903, to Dec. 31, 1909, a period of 6 years and 3 months, and have found only 265 cases reported in which operation was done, with a mortality of 55.09 per cent. In attempting to arrive at an early diagnosis, I am convinced that we must make greater use of the preperforative stage, as it is certainly less dangerous to operate on a patient one hour before rather than 8 hours after perforation occurs. The principal symptoms are sudden pain, tenderness, and rigidity. The most important step has been taken when an early and correct diagnosis has been made. After the patient reaches the operating room, the table should be placed in the reverse Trendelenburg position. The abdomen should be carefully and rapidly prepared, and a right rectus incision made under cocain, using Schleich's solution, until the peritoneum is reached, this being anesthetized by the application of 10 per cent. cocain on cotton pledgets. The perforation, when found, should be closed with purse-string or Lembert suture if not too friable. Prolonged searching is inadvisable. Drainage is to be recommended, as among other things it provides for a possible second perforation. Flushing the abdominal cavity should be condemned.

DISCUSSION

Dr. Gordon Wilson, Baltimore: In spite of its frequency and importance, this condition is often unrecognized. The cardinal symptoms are pain, tenderness, and rigidity. Unfortunately, many text-books do not differentiate between the symptoms of perforation and those of the resulting peritonitis.

Dr. J. H. Branham, Baltimore: When resection is necessary, end-to-end anastomosis is often followed by sloughing; lateral anastomosis gives much better results.

Dr. Randolph Winslow, Baltimore: Operation must be done promptly, and therefore usually by the house surgeon, for if delayed until the arrival of the visiting surgeon, it is apt to be unsuccessful.

Dr. Joseph C. Bloodgood, Baltimore: I agree with Dr. Winslow as to the urgent need of prompt operation. Not only the physicians, but also the nurses, in attendance in a case of typhoid, should be constantly on the watch for symptoms of perforation, the most important of which are pain and localized tenderness. In some cases exploration will be negative, but in such cases at the Johns Hopkins Hospital there has been no mortality. I am inclined to believe that nitrous-oxid anesthesia may perhaps supplant cocain anesthesia in such cases. If there is any doubt as to the integrity of the suture the bowel should be sutured to the parietal wall.

Dr. L. K. Hirshberg, Baltimore: Why do those patients operated on about 8 hours after perforation show a lower mortality rate than those operated on even sooner?

Dr. Clotworthy Birnie, Taneytown: In one case the sudden onset of pain and tenderness was followed by the appearance of a mass in the right iliac fossa. The patient recovered in spite of the fact that operation was not permitted, so that I am inclined to think it was a case of typhoid appendicitis.

DR. EMIL NOVAK, Baltimore: The researches of Buxton showed that the entrance of a large number of typhoid bacilli into the circulation may produce death either within a few hours or after several days, and not so frequently in the intermediate period. Death at the early period is due to the setting free of an overwhelming amount of the typhoid endotoxin as the result of the extensive destruction of the bacilli. Hence the frequency of death by "shock," especially after the old practice of irrigating the abdomen. In the diagnosis of perforation. some lay much stress on the disappearance of liver dulness, but this is misleading.

DR. R. B. NORMENT, Baltimore: Inasmuch as mere drainage has been employed to care for a possible second perforation, it might be justifiable for the general practitioner, in case of emergency, especially in the country, to resort to this measure in the treatment of the original perforation.

DR. A. F. VAN BIBBER, Belair: There is difficulty in bringing the patient to early operation in country practice. I believe, therefore, that the point brought up by Dr. Norment is a practical one.

DR. CHARLES BAGLEY, JR., Baltimore: While it is true that lateral anastomosis is less dangerous than the end-to-end, it is rare that either is justified. Dr. Birnie's case. I believe, may have been one of perforation, for some recover even without operation.

A Rational Basis for the Study of Uterine Hemorrhage

DR. EMIL NOVAK, Baltimore: Hemorrhage is commonly looked on as a distinctly pathologic phenomenon, and hence the fact that there is such a thing as physiologic uterine bleeding lends a special interest to the study of uterine hemorrhage of the pathologic type. Not many years ago the cause of uterine bleeding was always sought in the endometrium, while now there is a tendency to explain many cases as a result of changes in the myometrium. That the endometrium is at fault in some cases admits of no doubt, as after abortion, in polypoid conditions, carcinoma, etc. At the same time, there is nothing characteristic in the appearance of the endometrium from bleeding uteri, as shown by the personal microscopic study of 50 cases, many of which showed an entirely normal mucosa, some a true endometritis, some a glandular hyperplasia irrespective of that occurring normally in the premenstrual period, etc. Muscular insufficiency (Theilhaber), disturbances in the elastic tissue (Anspach), or disease of the blood-vessels may explain certain cases. But the fact remains that there is a large group of so-called idiopathic cases in which no anatomic lesion whatsoever can be found. In these cases much can be learned by bearing in mind the entire mechanism of normal menstruation, which at bottom is a periodic vasomotor phenomenon affecting the pelvic vessels, the changes in the endometrium being probably only secondary. The underlying cause of menstruation is probably an internal secretion or hormone from the ovary, as shown by the effects of removal of the latter. Other hormones, however, also closely related to the process, as shown by the amenorrhea of pituitary deficiency and of thyroid hypersecretion, and the menorrhagia so frequently seen in myxedema. Many other facts show that the cause of at least a certain number of the many cases of idiopathic uterine hemorrhage is disturbance of one or other of the hormones of the body.

DISCUSSION

DR. J. H. BRANHAM, Baltimore: There is no doubt of the influence of the ductless glands in causing certain cases of uterine hemorrhage. The curette offers a valuable means of diagnosis when an anatomic cause exists. Not a few cases of bleeding are due to varicocele of the broad ligament, and many to displacement of the uterus.

DR. T. S. CULLEN, Baltimore: In a majority of cases there is some anatomic cause for the bleeding, but in a certain number the explanation must be sought along other lines, as Dr. Novak has pointed out. Our principal concern in such cases is the possibility of cancer, which usually, however, can be eliminated by the examination of curettings or of a clipping from the cervix.

Case of Mediastinal Tumor Arising from the Thymus

DRS. J. C. BLOODGOOD AND J. A. CHATARD, Baltimore: The patient was a man of 22, unmarried, who had never been very ill. He used a moderate amount of alcohol, and denied any venereal disease. Three weeks before admission to hospital he noticed a cough, and thought he had caught cold, as there was fever and a chill at the outset. In a few days he noticed that the neck was larger on the left side, while the left arm was somewhat swollen. The cough became decidedly worse and he had difficulty in breathing, getting relief only in an upright position. Appetite was good; bowels were regular. Physical examination showed a well-developed and well-nourished man, with slight cyanosis of the face and finger-tips, and some dyspnea. The left pupil was larger than the right, both reacting normally. There was some dilatation of veins over the left upper chest and shoulder. Above the left clavicle was a rather firm, nodular mass, not painful to pressure; no bruit. Above right clavicle was a large gland the size of a pigeon-egg; glands elsewhere over the body were somewhat enlarged. Expansion of the left side of the chest was distinctly less than of the right, and the circumference was greater. The lower left back and axilla, on percussion, gave a dull almost flat note; the line of dulness moving with position of patient. Breath sounds were suppressed; no râles; no tracheal tug. Abdomen was normal except for enlargement of superficial veins. Leucocytes 10,000, differential count not made. In the week or ten days the patient was under observation, temperature and pulse were normal. Cough and dyspnea became steadily worse, and on two occasions the patient was tapped, 300 and 400 c.c. bloody fluid being drawn off, with only very slight relief of symptoms. Adenitis and syphilis were excluded, the diagnosis resting between Hodgkin's disease and mediastinal tumor, in favor of the latter. On account of the urgency of the symptoms, an exploratory operation was performed by Dr. Bloodgood. The tumor proved to be a sarcoma arising probably from the thymus.

The Country Hospital

DR. LAURA E. READING, Centerville: Nothing is more needed at this time in the counties of our state than the establishment of rural hospitals for the treatment of patients at home. More ground can be given in the country, with fresh air and sunshine for disinfectants. Quick relief is salvation, and our farmers cannot afford to lose time from their farms, for with them time is money. There are three reasons for the establishment of country hospitals: to train students; to compel the country physician to be up to date; above all, to give people in the country every facility for prevention of unnecessary suffering.

Infections of the Endometrium

DR. W. S. GARDNER, Baltimore: This paper is based on the study of a number of cases which are known to have been infected. Microscopic examination of the curettings from such cases shows that the reaction of the endometrium to infection is essentially similar to that of other tissues, and that easily recognizable structural changes are often left as a result.

A National Department of Health

DR. J. N. MCCORMACK, Bowling Green, Ky.: At present there is no opposition to the plan of creating a department of health from the head of any existing department except perhaps one. The president is in favor of the plan, and has even promised to send a special message to Congress if necessary. It is questionable whether this legislation will be obtained at this session, in an unchanged form at least. It may be advisable to yield on some points for the present. The project is receiving the support of many lay bodies throughout the country, and it is to be hoped that Maryland will be well represented at the coming hearing on Senator Owen's bill.

(*To be continued*)

Deaths

Howard Taylor Ricketts, one of the most notable young workers in the field of medical research, died in the American Hospital in the City of Mexico, May 3, from typhus fever, contracted while pursuing investigations regarding the causation of the disease, aged 39.

He received his literary degree from the University of Nebraska, Lincoln, in 1894; and was graduated from the Northwestern University Medical School, Chicago, in 1897. He served as intern in Cook County Hospital from 1897 to 1899 and then continued his research work; was made fellow in cutaneous pathology in Rush Medical College, and in 1889 was made instructor in pathology. During this time he pursued his researches on blastomycosis. In 1902, Dr. Ricketts was made associate professor of pathology in the University of Chicago. His next important work in medical research was regarding the Rocky Mountain spotted fever (tick fever), which occupied his attention for several summers. In 1906, his book on "Infection, Immunity and Serum Therapy" appeared, which has gone through three editions and is a very complete short treatise on the subject. His latest research work was on the causation of typhus fever (tabardillo), which has been epidemic in Mexico for some time past. He was recently appointed professor of pathology in the University of Pennsylvania, and accepted the position with the understanding that he was to be free to continue his researches during the winter, spring and summer.

Dr. Ricketts has been for several years a valued editorial writer on The Journal and much of his research work has been done under grants made by the Committee on Scientific Research of the American Medical Association.

His society membership included the American Medical Association, the American Association of Pathologists and Bacteriologists, and the Chicago Medical, Clinical and Pathological societies. He was a persistent, untiring and insatiable worker, and to this his illness and death are probably due, as he was worn out when he returned to Mexico in April.

A signal honor was shown Dr. Ricketts' memory when President Diaz of Mexico directed that the professors and students of the National Medical School be present on the occasion of the removal of the body to Chicago, and that the medical school and institute of bacteriology be draped in mourning three days.

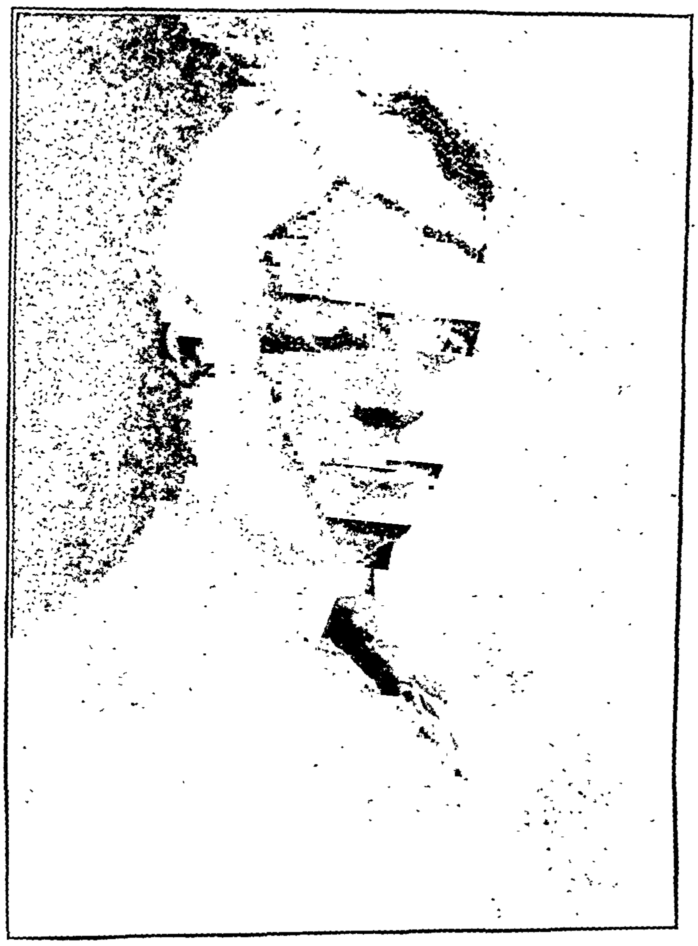
The *Brooklyn Eagle*, in commenting on Dr. Ricketts' illness, stated: "He may thus add one more name to the list of modern martyrs of science who get but a passing thought from the preoccupied people of the United States."

The Chicago *Evening Post*, in an editorial, April 30, before his death, said that Dr. Ricketts "belongs to the small corps of American physicians and scientists who are achieving distinction for their scientific research in the origin and course of disease. Dr. Ricketts represented the universities in this corps, having been associated for several years with the University of Chicago. It would be a great pity indeed if he should be cut off before his promising career had reached even its prime."

The Chicago *Tribune*, May 6, in an editorial entitled "On the Firing Line," said: "The death of Dr. Howard T. Ricketts adds another name to the long honor roll of science. The endless warfare that mankind has fought against ignorance and its child, disease, has claimed another victim, but the fight goes on. Dr. Ricketts left his unfinished investigations to his fellow workers in the field of medical research. But he left something much more precious to his fellow men—the example of a high courage and devotion in the cause of humanity.

"Dr. Ricketts died on the firing line of human progress, and it is inspiring to believe, as we may, that he did not die in vain. Mankind is richer for his living and nobler for his dying."

To the personal friends of Dr. Ricketts the news of his death will bring, to an unusual degree, a sense of personal loss. Quiet, modest, unassuming, he had a singularly lovable disposition and a capacity for *friendship* beyond the average. The friends of his college days and the intimate associates of his years of teaching and research had anticipated for him a long and brilliant career, and unite in deploring the sudden termination of a life of usefulness and promise.



Howard T. Ricketts, 1871-1910.

Oliver Phelps Barber, M.D. Bellevue Hospital Medical College, 1870; for fifteen years surgeon of the Michigan Central Railroad at Saginaw and chief surgeon of the Pere Marquette System; a member of the local pension examining board; police commissioner of Saginaw in 1895; for two years president of the Saginaw General Hospital and surgeon to that institution, St. Mary's and the Woman's Hospital; professor of surgery in the Saginaw Valley Medical College and the Michigan College of Medicine, Detroit; major and surgeon of the Thirty-fifth Michigan Infantry, U. S. V., subsequently division surgeon of the Second Division, Second Army Corps, during the Spanish-American war with service in Cuba; died at his home, April 26, from nephritis, aged 60.

Frederic Tilden Brown, M.D. College of Physicians and Surgeons, New York City, 1880; of New York City; a member of the American Medical Association, New York Academy of Medicine, and American Association of Genitourinary Surgeons; professor of genitourinary diseases in the University and Bellevue Hospital Medical College; attending surgeon to Bellevue Hospital, and consulting surgeon to the Presbyterian, Nassau and Mineola hospitals; is reported to have committed suicide at Bethel, Maine, May 7, aged 56.

Samuel Peachy Latane, M.D. University of Maryland, Baltimore, 1897; a member of the Medical Society of Virginia; for several years resident physician and superintendent of the Johns Hopkins University, Baltimore; and later health officer of Winchester, Va., and recently elected secretary of the Virginia State Board of Health; while making a professional call near Opequon, May 1, was instantly killed by the overturning of his automobile, aged 35.

William F. Barbat, M.D. University of California, San Francisco, 1895; a member of the American Medical Association; formerly secretary of the San Francisco County Medical Society, and assistant secretary of the Medical Society of the State of California; a member of the staff of the Clara Barton Hospital; died in his office in San Francisco, April 24, from the effects of a gunshot wound of the heart, self-inflicted, it is believed, with suicidal intent, while despondent, aged 35.

Andrew Jackson Widener, M.D. American Medical College, Eclectic, St. Louis, 1887; at one time secretary of the Arkansas State Eclectic Medical Board and author of the bill enacted by the last state legislature giving the state medical board power to revoke physicians' licenses for unprofessional conduct; died at his home in Little Rock, April 26, from acute gastritis, aged 52.

Richard Sandford Mallon, M.D. Cornell University, New York City, 1905; a member of the Medical Society of the State of New Jersey; of Paterson; a member of the staff of the Paterson General Hospital and associated with the pathologic department of that institution; died in the hospital, April 27, from acute nephritis, aged 31.

Eugene Hodenpyl, M.D. New York University, New York City, 1885; pathologist of Roosevelt Hospital; who recently called attention to the necrotizing effects on carcinoma cells of the fluid from a patient who had apparently recovered; died at his home in New York City, May 5, from pneumonia, aged 47.

Hartwell Augustus Sibley, M.D. Bellevue Hospital Medical College, 1878; a member of the Massachusetts Medical Society; a member of the board of health and city physician of Chelsea for twelve years; died at his home in Dorchester, Boston, April 27, aged 60.

Alfred James China, M.D. Medical College of the State of South Carolina, Charleston, 1860; surgeon in the Confederate service during the Civil War; since 1902, president of the First National Bank of Sumter, S. C.; died at his home, April 9, from uremia, aged 72.

John Frost Davis, M.D. Botanico-Medical College of Cincinnati, 1850; for many years a practitioner of Portsmouth, Ohio; died at the Southeastern Orphanage, Baldwin, Ga., of which he had been treasurer for seven years, April 17, aged 81.

James R. Haun (license, registration, Lawrence county, Pa., 1882); a veteran of the Civil War, and a prisoner in Andersonville for ten months; died at his home in Edinburg, April 22, from cerebral hemorrhage, aged 68.

Asa Milner (license, years of practice, Iowa, 1887); for nearly fifty years a practitioner of Marion county, Iowa; died at the home of his daughter in Roulette, N. D., April 21, from hypostatic pneumonia, aged 78.

Jesse J. Carlow, M.D. Western College of Homeopathic Medicine, Cleveland, 1856; for sixty years a practitioner of Gaysport, Ohio; died at his home in that place, April 23, from senile debility, aged 81.

Roland Mitchel, for nearly half a century a practitioner of Pea Ridge, Ark.; a surgeon in the Federal service during the Civil War; died at his home, February 25, from senile debility, aged 83.

Thomas Miller Lewis, M.D. Jefferson Medical College, 1857; a surgeon in the Confederate service during the Civil War; died at his home in White Post, Va., April 12, from diabetes, aged 77.

Jacob E. Hempstead, M.D. Jefferson Medical College, 1906; a member of the Medical Society of the State of New Jersey; died at his home in Paterson, April 23, from pneumonia, aged 35.

William H. Kennedy, M.D. University of Nashville, Tenn., 1857; a member of the legislature from Sanford county in 1872; died at his home in Kennedy, Ala., April 24, aged 84.

Raymond H. Koch, M.D. Medico-Chirurgical College of Philadelphia, 1907; formerly of Easton, Pa.; died at his home in Martin's Creek, Pa., April 27, from diphtheria, aged 26.

James W. Long, M.D. Cincinnati College of Medicine and Surgery, 1861; died at his home in Madisonville, Ky., April 26, from senile debility, aged 74.

E. George Stratton, M.D. Detroit Medical College, 1888; died at his home in Oakland, Cal., April 24, from the effects of an overdose of cocain, aged 42.

Charles Lewis French, a practitioner of California, for forty-five years; died at his home in Lakeport, Sept. 4, 1909, from arteriosclerosis, aged 77.

David N. E. Brown, from 1855 to 1895, a practitioner of medicine; died at his home in Butler, Ind., March 31, from arteriosclerosis, aged 78.

Oliver Loftin, M.D. University of Pennsylvania, Philadelphia, 1850; died at his home in Tyler, Texas, April 9, from bronchitis, aged 81.

Thomas Edward Stack, M.D. University of Dublin, Ireland, 1876; died at his home in Powell, Neb., April 22, aged 54.

James A. Kirkpatrick, M.D. Nashville; died at his home in Johnson City, Tenn., in January, from nephritis, aged 64.

Marriages

Carl L. Watson, M.D., Boston, to Miss Eva Bartlett Macey of Somerville, Mass., recently.

Elmer D. Twyman, M.D., Independence, Mo., to Miss Leda Allen of Dallas, Texas, recently.

Carl Miller Sneed, M.D., Columbia, Mo., to Miss Katherine Ruby Robb of Montreal, Que., April 20.

Edwin Racelle Raseley, M.D., Uniontown, Pa., to Miss Edith Brearley Flack, at Baltimore, April 26.

William Kenneth Turner, M.D., New Bedford, Mass., to Miss Emma Antoinette Bolduc of Boston, April 25.

Joseph Seymour Rambo, M.D., Chandlersville, Ohio, to Miss Catherine Frazier Cochrell of Philo, Ohio, April 26.

Matthew Cotton Darnell, M.D., Duckers, Ky., to Miss Ermina Jett of Frankfort, Ky., at Grassy Springs Church, April 27.

Association News

NEW MEMBERS

List of new members of the American Medical Association for the month of April, 1910:

ALABAMA

Bell, S. B., Ozark.
Seatey, H. B., Tuscaloosa.

ARIZONA

Canby, C. B., Golconda
Watkins, W. W., *Phoenix.*

ARKANSAS

Hudson, T. F., Luxora.
Rowell, F. C., Hensley.

CALIFORNIA

Chapline, Frank, Orange.
Gleason, C. D. R., San Francisco.
Harris, J. B., Sacramento.
Hill, W. B., Long Beach.
Horn, Henry, San Francisco.
Howe, R. C., Colton.
Hull, F. E., Los Angeles.
McCoy, G. W., Los Angeles.
Newell, Edward, San Jose.
Simonds, P. E., Los Angeles.
Stalnchfield, H. C., Los Angeles.
Tebbetts, H. B., Los Angeles.
Tourtillatt, W. W., Lindsay.

COLORADO

Clarke, E. A., Canon City.
Fraser, Margaret E. V., Denver.
Pratt, Elsie S., Denver.
Rich, W. F., Pueblo.

CONNECTICUT

Elmes, F. A., Derby.

DISTRICT OF COLUMBIA

Williams, T. A., Washington.

FLORIDA

Steen, A. M., Palatka.

GEORGIA

Simmons, J. W., Jr., Brunswick.

IDAHO

Falk, Ralph, Boise.
Hoyt, J. E., Kendrick.

ILLINOIS

Alexander, J. S., Chicago.
Amerson, W. H., Chicago.
Applewhite, L. D., E. St. Louis.
Barth, H. N., Rockford.
Bing, E. A., Altamont.
Brown, C. E., Chicago.
Bushnell, C. H., Chicago.
[illegible]icago.
Evertz, Matthew, Chicago.
Faulkner, Louis, Chicago.
Fletcher, F. D., Chatham.
Fortune, H. C., Literberry.
Hall, W. S., Chicago.
Hanson, Joseph, Chicago.
Johnston, Theodore, Chicago.
Kelly, P. E., Chicago.
Kierulff, L. A., Chicago.
Kobisk, F. B., Lombard.
Koll, I. S., Chicago.
Linder, L. J., E. St. Louis.
McKee, C. W., Chicago.
Molnar, Helen B., Chicago.
Oliphant, Lizzie W., Chicago.
Porteus, R. W., Chicago.
Reed, C. H., Chicago.
Ruppert, G. F., Elgin.
Schinkelberger, P. C., Chicago.
Schrager, V. L., Chicago.
Skaggs, C. S., E. St. Louis.
Smith, H. S., E. St. Louis.
Statkiewicz, W., Chicago.
Stogol, J. B., Chicago.
Swan, C. J., Chicago.
Teter, D. P., Chicago.
Thackeray, W. T., Chicago.
Thompson, G. F., Chicago.
Thorsgaarde, K. L., Chicago.
Tobia, Emilio, Chicago.
Toler, T. W., Astoria.
von Toll, Edward, Chicago.
Walker, H. S., Chicago.
Woodyatt, R. T., Chicago.

INDIANA

Castello, H. F., Decatur.
Ford, J. H., Indianapolis.

IOWA

Brisbine, R. E., Atalissa.
Dewey, W. H., Moville.

KANSAS

Church, Mary V., Topeka.
Davis, A. M., Chanute.
Davis, D. H., Independence.
Ekblad, V. E., Scandia.
Greenfield, Sara E., Topeka.
Grigsby, C. E., Coffeyville.
Lytle, C. R., Durham.
McIlhenny, R. A., Conway Springs.
Righter, W. H., Topeka.
Taylor, O. A., Topeka.
Worley, J. F., Emporia.

KENTUCKY

Barnett, A. M., Louisville.
Gribble, B. G., Louisville.
Gibson, T. T., Shamrock.
Guthrie, H. S., Louisville.
Lester, W. H., Dublin.
Long, R. W., Madisonville.
Prather, S. S., Louisville.
Tate, L. A., Hopkinsville.
Threlkeld, A. E., Wheatley.
Travis, D. J., Eddyville.
Wyatt, I. L., Buffalo.

LOUISIANA

Caine, A. M., New Orleans.
Devron, J. A., New Orleans.
Gray, E. B., Colfax.
Guthrie, J. B., New Orleans.
Mioton, S. F., New Orleans.
Points, J. F., New Orleans.
Weaver, W. H., McDonoghville.

MAINE

Bolster, W. W., Lewiston.
Ferren, F. L., Cumberland Mills.
Larrabee, E. G., Hebron.
Stewart, D. M., So. Paris.
Trufant, L. H., Norway.

MARYLAND

Duke, W. W., Baltimore.
Simon, C. E., Baltimore.
Thieme, G. C., Baltimore.

MASSACHUSETTS

Johnson, F. E., Erving.
Peirce, A. H., W. Newbury.
Stone, G. H., Clinton.

MICHIGAN

D'Arcy, Benjamin, Mayville.
Gregory, M. S., Traverse City.
Helkie, W. L., Three Oaks.
McIntyre, J. E., Lansing.
Minor, E. B., Traverse City.
Obetz, H. L., Detroit.
Seidel, U. D., Reed City.
Spoor, A. A., Big Rapids.
Stafford, C. M., Detroit.
Turrell, C. M., Yale.
Wells, R. E., Traverse City.

MINNESOTA

Bloom, C. J., Lake Park.
[illegible] Edith G., St. Paul.
Hoffmann, J. L., Elbow Lake.
Hunt, H. E., St. Paul.
Kierland, P. E., Mahnomen.
Melby, Benedik, Blooming Prairie.

Robertson, H. E., Minneapolis.
Sanderson, E. T., Minneota.
Walters, F. R., Moose Lake.
Will, W. W., Bertha.

MISSISSIPPI

Brookshire, J. L., Hushpuckena.
Parvis, J B., Laurel.
Tenent, C. H., Senatobia.
Waldauer, Joseph, Vicksburg.

MISSOURI

Alexander, R. D., St. Louis.
Axline, J. T., St. Louis.
Barclay, Robert, St. Louis.
Baron, Jules, St. Louis.
Bauer, C. E., St. Louis.
Brandon, J. P., Essex.
Digges, W. L., New Madrid.
Fakes, J. D., LaForge.
Feinstein, L. A., St. Louis.
Frouske, M. G., St. Louis.
Fuhrmann, R. H., St. Louis.
Goodman, D. C., St. Louis.
Gosney, C. W., Kansas City.
Gray, R. Q., St. Louis.
Langen, W. M., St. Louis.
Hanser, H. A., St. Louis.
Harris, D. L., St. Louis.
Henschel, Edward, Winona.
Hyndman, C. E., St. Louis.
Ilg, Theodore, St. Louis.
Jenkins, J. M., St. Peters.
Kerwin, W., St. Louis.
Kitchen, W. B., Glasgow.
Koetter, A. F., St. Louis.
Konzelman, P. R., St. Louis.
Kreeger, G. B., St. Louis.
Kuper, G. H., St. Louis.
Lingenfelder, Julius, St. Louis.
Meyer, H. H., St. Louis.
Mills, R. W., Webster Groves.
Moore, O. T., St. Louis.
Neer, E. D., St. Louis.
Oatman, L. J., St. Louis.
Powell, I. W., St. Louis.
Quigg, H. D., Marshall.
Reder, Francis, St. Louis.
Reid, Florence J., Kirksville.
Rice, D. F., St. Louis.
Shahan, W. E., St. Louis.
Shanklin, B., St. Louis.
Sharpe, J. B., Senath.
Smith, W. M., Springfield.
Spain, Kate C., St. Louis.
Tooker, C. W., Jr., St. Louis.
Trask, C. D., Kansas City.
Tuttle, G. M., St. Louis.
Von Schrader, A., St. Louis.

NEBRASKA

Anderson, D. F., Edgar.
Brown, H. R., Daykin.
Kalar, Sara Blaine, Bloomfield.
Pickens, E. A., Benkelman.
Tayman, E. M., Cozad.
Way, F. E., Wahoo.

NEVADA

Swezy, C. E., Winnemucca.

NEW HAMPSHIRE

Sargent, F. H., Pittsfield.

NEW JERSEY

Bleick, T. E., Newark.
Bonynge, H. A., Ridgewood.
Carroll, W. H., Passaic.
Harman, H. M., Frenchtown.
Kensinger, W. H., Camden.
Perkins, J. L., Cranford.
Ramos, N. I., E. Orange.
Rauschenbach, P. E., Patterson.
Rose, W. W., Newark.
Warncke, F. H., Elizabeth.
Woods, A. L., South River.
Zehnder, A. C., Newark.

NEW MEXICO

Colbert, J. W., Albuquerque.
Miller, C. A., Tularosa.

NEW YORK

Agnelli, S., New York City.
Andrew, J. H., Brooklyn.
Batten, H. E., Corning.
Bissell, W. G., Buffalo.
Borzilleri, C. R., Buffalo.
Bowen, D. R., Rome.
Brown, A. H., Auburn.
Carpenter, C. A., Bedford.
Cook, F. H., Middletown.
Coborn, Josiah, Hopewell Junction.
Erdman, Seward, New York City.
Foster, N. B., New York City.
Gillen, H. B., Cohoes.
Harnden, Frank, Brooklyn.
Heston, E. H., Arlington.
Hutton, Lefferts, New York C[illegible]
Kibbe, E. J., Rochester.
Knowlton, F. P., Syracuse.
Krug, E. F., New York City.
Leopold, J. S., New York City.
Lewis, M. B., Sag Harbor.
Lindeman, H. E., New York City.
Lombardo, Melchiore, Brooklyn.
Massey, M. L., Buffalo.
Mellor, L. R., Syracuse.
Mislig, Michael, New York City.
Needham, G. G., New York City.
Neil, James, New York City.
Paul, G. P., Round Lake.
Peart, W. A., Sanborn.
Pentlarge, V. H., Brooklyn.
Potter, Marjory J. M., Niagara Falls.
Power, W. T., New York City.
von Raitz, Feodor, New York City.
Regester, Hyatt, Buffalo.
Roof, S. W., New York City.
Root, Mary P., Millbrook.
Rose, J. T., Brooklyn.
Schoonmaker, Hubert, Clifton Springs.
Strong, F. R., Brewerton.
Thompson, E. M., Brooklyn.
Tweddell, Francis, New York City.
Valanti, F. A., Buffalo.
White, G. S., Yonkers.
Winters, W. P., Geneva.
Wood, W. B., Tannersville.
York, Margaret M., Flushing.

NORTH CAROLINA

Baynes, R. S., Hurdle Mills.
John, Peter, Laurinburg.
Mariner, N. B., Belhaven.
Tayloe, D. T., Washington.
Thornton, Irene, Fayetteville.

NORTH DAKOTA

Christensen, Walter, Lidgerwood.
Hedding, J. A., Hope.
King, F. J., St. Thomas.
Lindner, E. R., Egeland.
Lorenzen, F. C., New Salem.
Plourde, W. A., Overly.
Steele, D. C., Fairmount.
Swarthout, E. F., Streeter.
Swenson, A. W., Bisbee.
Wheelon, F. E., Minot.

OKLAHOMA

Ballantine, H. T., Muskogee.
Booth, G. R., LeFlore.
Curd, W. E., Copan.
Rogers, C. T., Muskogee.
Sanger, Winnie M., Oklahoma.
Smith, R. V., Guthrie.
Williams, J. C., Stroud.

OHIO

Bauer, A. C., Cincinnati.
Butler, R. H., Bellefontaine.
Coate, C. R., Laura.
Cook, H. J., Cincinnati.
Dexter, Richard, Cleveland.
Doughty, W. M., Cincinnati.
Gardner, D. S., Massillon.
Harding, B. F., Mansfield.
Lamb, F. H., Cincinnati.
Marquart, O. M., Springfield.
May, R. J., West Salem.
McKesson, E. I., Toledo.
McPherson, C. G., Xenia.
Minnig, Arnold, New Philadelphia.
Mussey, R. D., Cincinnati.
Nuss, W., Cleveland.
Patterson, C. L., Dayton.
Peterka, Edward, Cleveland.
Prunty, F. J., Belpre.
Rabe, J. W., Akron.
Rea, E. H., Irondale.
Schlesinger, W. A., Cleveland.
Shank, R. R., Trotwood.
Shaw, J. H., Cincinnati.
Smith, L. B., Youngstown.
Stevenson, J. W., Cincinnati.
Stillman, G. B., Deerfield.
Tachauer, Albert, Columbus.
Tangeman, C. W., Cincinnati.
Webb, Dudley, Cincinnati.
White, W. W., Ravenna.
Willey, A. J., Delaware.

OREGON

Belliner, G. C., Salem.
Brosius, F. C., Hood River.
Culin, Walter, Coquille.
Evans, J. C., Salem.
Fields, R. H., Gardiner.

PENNSYLVANIA

Boice, J. M., Philadelphia.
Cavill, F. T., Jessup.
Cramer, M. J., Monessen.
Crow, S. C., South Sharon.
Dearth, W. A., Pittsburg.
DeLong, F. E., Annandale.
Donaldson, A. B., Bala.
Francis, T. R., Connellsville.
Gurley, L. M., Johnstown.
Hassell, H. W., Philadelphia.
Heimer, L. B., Philadelphia.
Hemminger, E. F., Meyersdale.
Jackson, O. H., Meadville.
Kaufman, A. S., Philadelphia.
Kennedy, D. D., Pittsburg.
Klopp, E. J., Philadelphia.
Lapenta, V. A., New Castle.
Magee, D. M. P., Cynwyd.
McCready, J. H., Pittsburg.
Messmore, J. L., Masontown.
Morgan, D. W., Auburn.
Nisbet, F. L., Meadville.
Piersol, G. M., Philadelphia.
Potts, W. J., Greensburg.
Proescher, Frederic, Pittsburg.
Russell, R. K., Bradford.
Schnatterly, L. W., Freeport.
Shaffer, C. I., Jenners.
Shumaker, E. K., New Bethlehem.
Thompson, C. W., Meadville.
Thompson, R. W., McKean.
Williams, E. C., Port Trevorton.
Williams, J. A., Pittsburg.
Zimmerman, G. L., Lehmasters.

RHODE ISLAND

Simpson, G. E., Cranston.
Squire, A. F., Newport.

SOUTH CAROLINA

Anderson, J. L., Greenville.
Crafton, J. N., Colliers.
Howle, T. E., Hartsville.
Jervey, A. J., Charleston.
Pope, T. H., Kinards.
Sanders, R. L., Anderson.

SOUTH DAKOTA

Long, Martin, Custer.
Stegeman, S. B., Pierre.

TENNESSEE

Cullum, J. M., Fayetteville.
Green, J. R., Springfield.
Jones, J. H., Garbers.
Lovell, A. I., Graysville.
McDorald, J. T., Monroe.
Nichols, J. O., Etowah.
Richardson, R. M., Normandy.
Teas, J. J., Waverly.
Tucker, B. G., Nashville.

TEXAS

Allen, J. I., Bloomburg.
Beddoe, A. F., Dallas.
Berkeley, B. F., Alpine.
Bibb, L. B., Austin.
Brown, C. P., El Paso.
Burt, J. D., Farmersville.
Campbell, C. A. R., San Antonio
Clark, L. E., Ennis.
Dupree, W. A., Colorado.
Freeman, W. H., Lockney.
Fulcher, R. L., Blanco.
Fuller, M. L., Bradshaw.
Gallaway, A. H., Jr., Laneville.
Hanson, D. T., Amarillo.
Headley, A. M., Rio Grande City.
Inmon, E. H., Emma.
Jackson, L. B., San Antonio.
Lancaster, E. H., Houston.
Lee, W. R., Texarkana.
McCardell, Douglass, Cold Spgs.
McCloud, T. C., Bryson.
Myers, R. E., Kemp.
Newman, A. M., Canadian.
Patton, W. D., Amarillo.
Town, Col. F. L., San Antonio.

UTAH

Ashley, R. W., Salt Lake City.
Sprague, H. B., Salt Lake City.

VERMONT

Blaisdell, E. G., Bridport.
Blanchard, J. F., Newport.
Heminway, L. E., Manchester.
Welch, R. E., Franklin.

VIRGINIA

Meade, E. W., Castlewood.
Saunders, C. H., Chase City.
Strother, P. M., Scottsville.
Sturgis, W. J., Franktown.
Thornton, R. P., Republican Grove.

WASHINGTON

Anderson, E. M., Spokane.
Burns, A. E., Seattle.
Eldridge, H. L., Snohomish.
Hards, H. J., Tacoma.
Perkins, M. H., Tacoma.
Sawins, A. H., Spokane.
Wilson, C. S., Tacoma.

WEST VIRGINIA

Bowles, W. C., Milton.
Burgess, W. H., Williamson.
Mooman, Glenn, Petersburg.
Morrison, L. C., Hurricane.
Motley, J. C., Hinton.
Stroud, C. G., Erbacon.

WISCONSIN

Arveson, R. G., Frederic.
Borden, F. R., Plainfield.
Lemmer, G. N., Spooner.
McCarthy, G. W., Athens.
Rose, J. F., Lena.
Ross, H. R. T., Ladysmith.
Spencer, G. F., Evansville.
Sullivan, A. G., Madison.
Vaughan, Claude, Caroline.
Weber, A. J., Milwaukee.

WYOMING

Wiseman, Letitia, Cheyenne.

HAWAII TERR.

West, T. J., Makaweli.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Memorial on Behalf of the American Medical Association in Relation to Senate Bill (S. 6049) Establishing a Department of Public Health, and for Other Purposes

APRIL 26, 1910.—REFERRED TO THE COMMITTEE ON PUBLIC HEALTH AND NATIONAL QUARANTINE AND ORDERED TO BE PRINTED

To the honorable the Senate and House of Representatives in Congress assembled:

On behalf of the American Medical Association, an organization representing 76,000 physicians, embracing every state and territory in the United States, I respectfully submit for the consideration of Congress the following reasons why a department of public health rather than a bureau should be established:

Bureaus have existed for a hundred years, and every effort made to secure such a department as would adequately protect the health and lives of the people during the last forty years has been met with the proposition, now in the minds of some, to enlarge the powers of some existing bureau. (See report of the Walcott Commission, Exhibit 1, herewith.)

Eight of nine secretaries employ medical men. All of the departments have medical and sanitary problems which they are called on to and must solve.

The War and Treasury departments are now crossing and duplicating the work of each other in Porto Rico, Cuba, Panama, the Philippines, and not long since in California.

The Army, Navy, Treasury and Agricultural departments all have large and important laboratories devoted to medical and sanitary problems.

The War and Navy departments each has a medical school for its officers, and the Treasury should have one unless there is to be a department of health, in which event they might all be consolidated in the interest of both efficiency and economy. The War, Navy and Treasury departments each has hospitals in the more important centers of the United States. Each has a tuberculosis hospital; each has a leprosy hospital.

The Department of Justice gives all legal advice and service to every other department. (See Rev. Stat., secs. 187, 189, 360, 361, 362, 363, 364, and 365.) The secretary of health should in the same way provide for all medical and sanitary advice and service, be responsible for all men so employed, and detail them to advise and assist other departments as they may be required. This department should also provide for all expert medical and sanitary testimony required by other departments or United States courts.

There should be one authoritative department for all official information on sanitary and medical matters, so as to lead to a definite governmental policy, making it possible for all who are charged with official responsibility to act under definite law and departmental ruling.

This central department of official sanitary and medical opinion should have the power, and should be required by law, to advise and assist all other departments in the solution of sanitary and medical problems.

Individually the present bureaus and other sanitary and medical agencies perform their ordinary functions satisfactorily, but with such lack of cooperation as greatly to mar results, while in the emergency of epidemics or in dealing with vast interests where the strain of commercial pressure falls on them they almost uniformly fail or are greatly crippled in their sanitary functions. This is the history of even so strong a movement as that of the enforcement of the Food and Drugs Act. It is the history of the Public Health and Marine-Hospital Service of the Treasury Department, and it must and will be the history of any bureau or agency employed for health service whenever it is a minor function in any great commercial department; or, in other words, until the day comes in which there shall be a department whose sole purpose and responsibility is for the health and life of the people, and in which all these varied health agencies can be collected and coordinated.

The following agencies should be transferred to the proposed department of health:

Treasury Department: Public Health and Marine-Hospital Service; medical officers of the Revenue-Cutter Service.

Agricultural Department: Chemistry Division in all that pertains to the purity of human food and drugs; meat-inspection service of the Bureau of Animal Industry; those engaged in the study of human disease in the Biological Division.

Department of Commerce and Labor: Hospitals of the Immigration Bureau; Division of Population, after the compilation of the Census of 1910, and in time for the Census of 1920; the medical officers of the Coast and Geodetic Survey.

Interior Department: Physicians of Indian schools and agencies; physicians of the Alaskan school service; physicians of the United States Reclamation Service; hospitals and medical attendants of the United States National Homes for Old Soldiers; the medical examiners, etc., of the Pension Bureau; the Government Hospital for the Insane; the Freedmen's Hospital.

Department of Justice: Physicians and oculists employed at United States penitentiaries.

Department of State: Foreign hospitals under subsidy; the International Sanitary Bureau.

The War and Navy departments have not been included as the opinion largely prevails that these military functions should not come under a civil bureau.

The department should provide for the medical attention to be given and the sanitary precautions which should be taken in the Philippines, Porto Rico, Hawaii, Panama, and all other lands which are under the exclusive jurisdiction of the United States, and for special study of the problems peculiar to each of them.

A very large part of the work of such a department will of necessity be, acting and cooperating always with and through the state and local boards of health, the investigation of causes, methods, of spread and prevention of tuberculosis, pneumonia, influenza, typhoid fever, cancer, measles, diphtheria, scarlet fever and other common domestic pestilences which cause such a large part of the sickness and mortality of every community. To be effective this scientific research work should be continuous, and on such a scale as is only possible under national authority. Interstate pollution of rivers and water supplies would need to be carefully studied, with the view of prevention, involving the great problem of sewerage and drainage.

Studies would need to be made and railroads instructed as to the sanitation of moving trains engaged in interstate traffic, especially as to the ventilation, heating, and water supply of sleeping cars and other coaches, the best methods of preventing the pollution of the track over which they pass and the stations at which they stop.

The results of these investigations and of all similar matters will have to be communicated to the people, and to be most effective this will require the cooperation of the educational agencies of the Government and the states, as none can reach the people like the teachers of the primary and higher schools, colleges, and universities. The department would also prepare leaflets for the use of the local authorities and for the information of the people, as the Agricultural Department now so well does as to the affairs within its domain.

Therefore provision should ultimately be made to include within this department all the educational agencies of the United States, for the reason that their work is more allied to this department than any other, and especially as they have to deal with those who are in the formative and impressionable period of life and would be most benefited by such life-saving knowledge.

It should be made clear that the department would have no authority to act in intrastate matters, except upon request and in cooperation with state authority, along the lines which now exist between the Agricultural Department and the states. It should be made equally clear that in dealing with interstate and foreign matters it shall be supreme.

Those associated with me by no means undervalue the work now being done under existing health agencies at Washington, and it is not intended that what is here said shall be so construed. Scattered, operating under indefinite or conflicting laws or regulations, comparatively lost in departments created for other purposes, and under chiefs little interested and sometimes not in sympathy with their work, they deserve commendation instead of criticism for what they have done under great difficulties. Nor do we overlook the fact that some states and municipalities are doing admirable work along these lines and that all of them are doing something. But when it is remembered that 600,000 people die and 3,000,000 more are seriously sick every year from causes which are distinctly and practically preventable, bringing sorrow and expense to thousands of homes often least able to bear the latter, and lowering vitality and efficiency beyond the conception of those who have not made a study of the subject, it is not to be wondered at that educators, business men, labor leaders, and men and women in all the walks of life have joined in the plea so long made in vain by the medical profession that the health and life of human beings, by far the greatest asset of the nation, shall at least have as much protection from the National Government as is now so properly and generously provided for domestic animals.

Such a department as we ask you to create, with its corps of trained experts, would be engaged every day in every year in such duties as investigating the cause and prevention of cancer without waiting for a special message from the President; in the extermination of hookworm in Porto Rico and in the states without a plea from Mr. Bryan or a donation from a great captain of finance; the suppression of influenza, a great menace to national health; and in the solution of a hundred other similar problems which are of such scope that the work must be done by the central government or not at all. In view of the recent great increase in the cost of living, which many believe is permanent, and of the common saying, which is probably as true as it is trite, that "the average American family wastes more than would maintain the average European family" for lack of definite information, a practical study of food values and of the most nutritive preparation of food should be given a like prominence to that now so well and ably given to adulteration by Dr. Wiley.

Acting through existing state and local authorities and at relatively small expense, such a department would gather the facts as to the cause and location of every case of sickness and death which occurs in this country, classify, study, and in diagrammatic or other easily understood way put them in every school and home, certainly a warning service of equal value to that conducted by the Weather Bureau. Under such a coordinated system, which is believed to be entirely practicable, the nation, states, municipalities, and counties, each working within its own sphere but in cooperation, and especially with the aid of educators, to make such health and life-saving knowledge a part of the warp and woof of every child, it would be only a question of time until the benefactions of now existing and greatly extended modern science would be placed within the reach of every hearthstone.

To meet the criticism of those who may find it difficult to understand the altruism back of this movement it may be proper to say in conclusion that no one leading in it has any aspirations or ambitions to serve or is in position to or would accept any place in such department if created. Further, in so far as doctors succeed in preventing disease they diminish their own income, this being probably the only vocation which has for years consistently and persistently advocated legislation looking to its own elimination. Subordinated bureaus have failed, and, in the very nature of the vast problems and interests involved, must always fail to meet the needs of such a country as ours; and in the light of this history and supported by the opinion of thousands of disinterested men who have made this subject their life study we urge the creation of such a department as will enable our nation to lead the world in public health work, as it is already doing in so many other ways.

J. N. McCormack.

Representative of the American Medical Association.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
Bowling Green, Kentucky

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month—First Weekly Meeting

Subject for the Month: The Psychoneuroses
Neurasthenia

Etiology: Age, sex, race, debilitating conditions in parents, occupation, physical and mental stress, excesses, trauma, acute illness, chronic diseases.

Symptoms: Essential Symptoms (Charcot): Headache, backache, gastrointestinal atony, neuromuscular weakness, cerebral depression, mental irritability and insomnia. Clinical forms, cerebral, spinal, cardiovascular, gastric and sexual.

Motor Symptoms: Muscular weakness, *tremor, twitchings,* increased reflexes.

Sensory Disturbances: Fatigue, headache, backache, tender spine, paresthesias.

Disorders of Special Senses: Sight, hearing; smell and taste.

Gastrointestinal Disorders: Indigestion, constipation, flatulence, etc.

Circulatory Disturbances: Palpitation, rapid pulse, vasomotor disorders.

Genital Disorders.

Mental Disturbances: Mental asthenia, loss of memory, depression, nosophobias.

Insomnia.

Diagnosis: Hysteria, petit mal, tabes, general paresis.

Reference Books for the Tenth Month

Church and Peterson: Nervous and Mental Diseases.
Dana: Nervous Diseases. Savill: Neurasthenia.
Pearce: Nervous Diseases. Janet: Hysteria.
Mettler: Nervous Diseases. Turner: Epilepsy.
Spratling: Epilepsy and Its Treatment.

Book Notices

The Practice of Surgery. By Walter G. Spencer, M.S., Surgeon and Lecturer on Surgery, Westminster Hospital, and George E. Gask, F.R.C.S., Assistant Surgeon and Demonstrator of Practical Surgery, St. Bartholomew's Hospital. Cloth. Price, $5.50 net. Pp. 1,234, with 707 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

This is the tenth edition of a work originated by the late W. J. Wolsham, with such extensive changes by the new authors that it is practically a new treatise. It is a compact, and as fairly complete a work as could well be condensed into one volume, covering surgical pathology and operative surgery. It has in its discussions of pathology much of the thoroughness which makes some of the German treatises so valuable, and, in the parts on operative indications and technic, the brevity, completeness and clearness which characterize English and American works. The arrangement of subjects is neither wholly anatomic nor wholly by regions, but a compromise, the blood-vessels, nerves and muscles, and bones and joints each occupying separate chapters. The rest of the book is arranged by regions, *i. e.*, extremities, head, spine, neck, chest, abdomen, stomach, intestines, etc., each division forming a complete article. In some departments the material has been condensed almost too much, as in the short sections on hernia and goiter.

The book has been brought well down to the present year in pathology and operative practice, including the various serum reactions, radium therapy, cystoscopy, ureteral surgery, and the newer methods in intestinal suture. The writers often omit credit to foreigners in describing their methods, a fault of which French and German authors are equally guilty. Mr. Gask has contributed a chapter on hematology and many valuable plates and photographs, mainly from specimens in St. Bartholomew's Hospital. Besides some 700 illustrations in the letter-press, there are 48 full-page colored plates and skiagraphs. Among the other plates are several showing gross sections of renal tumors photographed in colors, and one in colors showing the local curative effect of radium applied to a facial nevus.

My Personal Experience with Tuberculosis. By Will M. Ross, Stevens Point, Wis. Paper. Price, 50 cents. Pp. 64. 1910.

This little brochure is full of practical information for the lay reader about tuberculosis and how the victim of the disease should go about it to be cured. The author, from practical experience, has a most intelligent conception of the subject and presents it in an intelligible way, stating the direct and indirect causes, how to recognize them, gives proper caution about fake cures and fake treatment, recognizes that the open-air and good food treatment is the proper one, emphasizes the value of rest, cautions the victim about the use and abuse of exercise, gives an excellent diet list, shows the value of living by schedule, tells of things to be avoided, sets out the necessity for preventive measures, the care of the sputum, warns against the dangers of the convalescent stage, which he says is the most difficult stage, and says *that at* least five years of careful regimen should be observed before considering oneself cured. We have seen no more practical or more sensible pamphlet from a layman than this and none of more educational value in the fight against tuberculosis.

The Bacteriologist's Aid to Memory (A Handy Reference Sheet for the Laboratory). By J. W. S. Seccombe, M.R.C.S., Price, 3 shillings 6 Captain, Royal Army Medical Corps. Paper. pence. London: John Bale, Sons, and Danielsson, Oxford House, 83 Great Titchfield St., Oxford St. W.

This is a large sheet, 3¼ by 3¾ feet, on which are recorded the cultural characteristics on a large number of media, the morphology, the reaction to Gram's stain and miscellaneous properties of thirty-nine different bacteria. Brief remarks are added on the *Amœba dysenteriæ*, Leishman's body and the trypanosomes. Spaces are also left blank, presumably for the addition of the results on other media. Although the chart is not asserted to be exhaustive, omissions of certain phenomena, like the reaction of the staphylococci, streptococci and other organisms to the Gram stain, make it less useful. The convenience, however, of having the large number of characteristics of the more common organisms on one large page will undoubtedly appeal to most laboratory workers.

SOME COMMON REMEDIES AND THEIR USE IN PRACTICE. By Eustace Smith, M.D., Fellow of the Royal College of Physicians. Cloth. Price, $1.25 net. Pp. 112. New York Paul B. Hoeber, 1910.

This little book treats of the clinical use of such common drugs as tartar emetic, oil of turpentine, iron, the alkalies, opium, sodium salicylate and some antispasmodics. While not denying the superiority of the newer methods of treatment in various troubles, the author emphasizes the fact that in the remedies named we have sure weapons for fighting many of the conditions with which the practitioner comes in contact daily, and that more study and attention should be given to their clinical use. For these drugs many uses are given which are not mentioned in the ordinary text-book, and which are at variance with the usual conception of their use in certain instances. The book contains clinical observations of value, and suggests a more careful study of common remedies.

Medicolegal

Sufficient Evidence of Publicly Professing to Practice Medicine

The Supreme Court of Iowa says, in the case of State vs. Yates (124 N. W. R. 174), that one witness testified that the defendant said he was healing the sick and curing people. Another witness said that he applied to the defendant for treatment for an arm injured by a severe fall on the sidewalk, and was told by the defendant: "Take off your coat, and I will cure you, and it will be all right when you leave here," after which the defendant worked at him for twenty minutes. A third witness testified that he got acquainted with the defendant at a boarding house, and heard him talk with people about the business he was in: "He talked about treating people. He told that he rubbed people and cured them. He said that he was treating people any place he went. He did not say how many people he treated, nor name, nor describe the treatment he gave his patients." This witness said that he applied to the defendant for treatment, and was told that he (the witness) "had a healing in his throat," which the defendant rubbed, and said he could relieve. The defendant gave him treatments, but he got no relief. Subsequently, in regard to payment, the defendant told this witness that he was in the habit of charging $5 for three treatments. The witnesses who testified to being treated said that the defendant did not use medicine or surgical instruments. The court thinks that there was enough evidence to sustain a conviction for publicly professing to practice medicine and to cure and heal within the general rule stated by this court in State vs. Heath, 125 Iowa, 585.

Duty of Injured Person to Prevent Accumulation of Damages

The Supreme Court of Alabama says, in Birmingham Railway, Light and Power Co. vs. Anderson (50 So. R., 1021), a personal injury case brought by the latter party, that, in general, it is the duty of one injured by the negligent act of another to exercise an ordinary degree of care and prudence to prevent the accumulation of damages. Where his injuries are personal, he is bound to take such care of them as a reasonably prudent person would in like circumstances, and can only recover such damages as would have been sustained had such care been taken. He must employ such medical or surgical aid as ordinary prudence would require under the circumstances. If the contention is that his injury was aggravated by negligence, the burden is on the defendant to show that fact in mitigation of damages.

If the injured person resorts to medical or surgical aid, consulting such a physician or surgeon as a reasonably prudent man would, and follows the treatment prescribed, certainly he discharges every duty he owes to the wrongdoer. Whether the duty rests on one who has suffered personal injury to submit himself to a surgical operation for the purpose of effecting a cure, and thus limiting damages, must depend on his judgment exercised in good faith.

The court thinks that a correct and reasonable rule for such cases is stated in Blate vs. Third Avenue Railroad Company, 44 App. Div. 163, 60 N. Y. Supp. 732, where it is said: "While the person who inflicts the damage has the right to say that sure and safe means to diminish the evil results of the accident must be used, that is the extent of his right. Whether further means should be resorted to is for the plaintiff to determine. In making that determination the plaintiff has the right to consider the nature of the means used to effect a cure and the possible or probable effect on himself. He has to determine for himself whether he is to resort to those means in view of those considerations." And further: "The jury, in getting at the damages, are to say, not only what they are, but whether the means used by the plaintiff to reduce the damages were such as an ordinarily prudent man would use. They cannot say that he should or should not have taken the advice of any particular physician, nor that he should have obtained any particular kind of treatment."

A requested instruction of the jury was correct which charged them that it was the duty of the plaintiff not to aggravate his injuries by his own neglect, and to use reasonable care to cure his injuries.

Sufficiency of Contract to Pay Physician—Visiting List as Evidence

The Supreme Court of Mississippi says that in Hardenstein vs. Brien (50 S. R., 979), a suit by a physician against an administrator of the estate of a Mrs. Harper, deceased, one witness testified that Mrs. Harper said that she had paid the physican nothing for services for about 16 or 18 years previously, but that in the last illness, running over many months, he had come to see her so often by day and night, any hour in the night he was sent for, that he must be paid for this; that the obligation was too great to be passed over. Another witness testified that one day she said to him that she wanted to pay him something for his services, as he had been good and kind to her, and said to him: "Make out a bill for me, Doctor," to which he answered: "Oh, no, Mrs. Harper; I cannot make out a bill; I don't want to, because you are the widow of a physician, and I won't think of doing such a thing." Referring to it again, she said: "Have you made out that bill?" and he said: "No; I have not made out any bill." Then she said: "I want the thing settled right now; have you made out any bill?" To that he answered: "No; I told you I was not going to make out any bill," and she said: "I want to give you something; will a thousand dollars do?" His reply was: "I would not think of asking that much." Again, she said: "How will $500 do?" and he said: "All right, I will take that."

This constituted a distinct contract, supported by a valuable consideration, namely, the services in the last illness. The effort to show that the amount Mrs. Harper agreed to pay Dr. Hardenstein for services to her in her last illness, that is, the sum of $500, was a gift merely, was preposterous, under the testimony.

Another physician testified that the customary and reasonable charge for a visit of a physician in the city was $2.50. The visiting list of the plaintiff contained no amount, but set out the dates of his visits, and the number of them. It was true that, when he first made this "visiting list," he had no intention of charging Mrs. Harper anything, and the entries in that list were not, at that time, made with a view of charging her. But, from the moment he made the contract with her to accept $500 for all his services during her last illness, he of course relied on these entries from that time forward as showing the dates of the visits and number of them, and the list was competent for that purpose from and after the making of the contract. He should have been permitted to recover on the testimony in this case to the extent of the contract, to-wit, $500.

nerves are more common than of the nerves of the extremities. Several patients had paraplegia from the navel downward. Tragic endings in apoplexy with hemiplegia, rapidly developing coma and death, may be the first announcement of cerebral trouble. Visual defects, from mere scotomata up to complete blindness, are frequently mentioned. The pupils vary in size and reactions. Troublesome tinnitus aurium and some degree of deafness occur. Dyspnea is frequent. Mental disturbances appear, as melancholia, maniacal outbreaks, delirium and coma. The priapism sometimes mentioned may have been due to vascular stoppage or to nervous involvement. One patient developed severe and long-continued herpes of a large portion of one side of the face. The symptoms in Hodgkin's disease referable to the nervous system in the cases noted were chiefly paralyses from pressure, lancinating pains, spasms of muscles, wasting, various sensory effects of pressure on nerve trunks, and the list that one would expect from involvement of cranial nerves. Herpes zoster was noted in one case.

Albany Medical Annals

April

112 Th[illegible] Between Cancer and Ulcer of the [illegible]ler Disease. D. Guthrie, Sayre, Pa.
113 Ac[illegible] Media. A. H. Brownell, Oneonta, N. Y.
114 High-Frequency Electricity in Treatment of Adenitis, Prostatitis, and Local Affections. W. G. Lewi, Albany.
115 Anterior Poliomyelitis and its Treatment by Muscle Training. J. M. Berry and B. van Denbergh, Troy, N. Y.

Texas State Journal of Medicine, Fort Worth

April

116 Limitations of the Use of Bismuth Paste in Chronic Suppurative Diseases. E. G. Beck, Chicago.
117 Sympathetic Ophthalmia. J. O. McReynolds, Dallas.

Journal of Advanced Therapeutics, New York

April

118 Phototherapy in Arterial Tension. T. D. Crothers, Hartford, Conn.
119 A Few Therapeutics from Observation of X-Ray Treatments. W. H. Mick, Omaha, Neb.
120 The Vacuum Method of Relieving the Overworked Senile Heart. M. M. Johnson, Hartford, Conn.

Alabama Medical Journal, Birmingham

April

121 Simple and Diphtheritic Sore Throat. B. D. Sibley, Birmingham.
122 Summer Complaints. G. L. Servoss, Fairview, Nev.
123 Cause and Treatment of Headaches. J. W. Knowlton, Birmingham.
124 *Splenectomy in Splenic Anemia—Recovery. E. M. Prince, Birmingham.
125 Abscess of the Spleen. U. J. W. Peters, Birmingham.

124. **Splenectomy in Splenic Anemia.**—Prince's patient, a male, aged 26, had had periodic attacks of malaria. Six years ago he was rejected by military authorities in his native country on account of a large tumor in the left side. Up to this time the patient knew nothing of the existence of the tumor. Operation was advised and done under gas-oxygen anesthesia. Many adhesions were found between the spleen and the abdominal wall, and on breaking these up a pocket of pus was found. The adhesions throughout were found to be plentiful and the bleeding was very troublesome. The patient was on the table 32 minutes; the pulse went up from 60 to 140. Adrenalin was given while he was on the table, and continued after he was removed to his bed; camphorated oil and strychnin were also given. He had marked cyanosis for ten hours after the operation, and oxygen was given continually during this time. The foot of bed was also elevated and other measures for shock used. Convalescence was uneventful, except for two elevations of temperature due to formation of stitch abscesses. The spleen weighed 56 ounces. The blood picture of this case is interesting: Before operation, red cells 2,400,000; leucocytes, 1,700; hemoglobin, 50 per cent. About 2 months after operation it was leucocytes 8,000; red cells, 5,000,000; hemoglobin, 90 per cent. Eight months after operation the patient is in perfect health, has gained 53 pounds in weight, and is at work as a day laborer.

Journal of the Tennessee State Medical Association, Nashville

April

126 Scientific and Economic Sides of the Meat Question. C. P. McNabb, Knoxville.
127 Multiple Sclerosis, Report of Case. S. T. Rucker, Memphis.
128 Histories of Neurotic Families. J. Lanski, Chattanooga.
129 Sarcoma of the Ovary. E. C. [illegible]emoss, Nashville.

Journal of Ophthalmology and Otolaryngology, Chicago

April

130 Shortening of an Ocular Muscle by Tucking. H. W. Woodruff, Joliet, Ill.
131 Removal of the Middle Turbinated Body. J. J. Kyle, Indianapolis.

Journal Michigan State Medical Society, Battle Creek

April

132 Final Results of Thyroidectomy for Exophthalmic Goiter. M. Ballin and J. W. Vaughan, Detroit.
133 Winter Cholera. M. L. Holm, Lansing.
134 Direct Transfusion. W. E. McNamara, Trimountain.
135 Phases of Chronic Diseases of the Stomach, Duodenum, Gall-Bladder and Appendix. W. T. Dodge, Big Rapids.
136 [illegible] of Blood-Pressure Observations. B. A. [illegible]
137 *[illegible] and Pus-Producing Infections of the Urinary Tract Complicating Pregnancy. C. M. Davis, Lansing.

137. Abstracted in The Journal, Oct. 9, 1909, p. 1224.

Northwest Medicine, Seattle

April

138 The Wassermann Reaction with a Laboratory Demonstration. A. P. Lensman, Seattle.
139 *The Result of 1,289 Wassermann Examinations. R. C. Matson, Portland.
140 *Latent Syphilis Diagnosed by the Wassermann Test. G. Baar, Portland.
141 *Early Diagnosis of Typhoid by Blood Cultures. E. P. Fick, Seattle.
142 Hyoscin in Obstetrics. G. Parrish, Portland.
143 Problems of State Tuberculosis Sanatoria. E. R. Kelley, Seattle.
144 Pathology of the Appendix. C. G. Sabin, Portland.

139. **The Result of Wassermann Examinations.**—In Matson's examination of 44 cases of primary syphilis, 95 per cent. were positive; in 55 cases of secondary syphilis 50 per cent. were positive; in 27 cases of tertiary syphilis 80 per cent. were positive; in 44 cases of latent syphilis 68 per cent. were positive; in 36 cases of visceral syphilis 88 per cent. were positive; in 3 cases of cerebral syphilis 100 per cent. were positive; in 2 cases of spinal syphilis 50 per cent. were positive; one case of hereditary syphilis was positive; in 6 cases of tabes 5, or 83 per cent., were positive. In his examinations of 112 individuals suffering from typhoid, tonsillitis, carcinoma, paraplegia, neuralgia, optic atrophy, neurasthenia, cerebral hemorrhage, simple anemia, pernicious anemia, aortic aneurism, herpes preputialis, ulcers of the glottis, cirrhosis of the liver, asthma and other diseases, including 9 cases of carcinoma, all were negative, except one case of liver carcinoma, in which the history was indefinite. He also applied the test in 600 inmates of the Oregon State Insane Asylum; 20 per cent. gave positive reaction, while only 5 per cent. gave specific histories, and none presented visible or clinical manifestations; 15 per cent. of 51 cases of dementia præcox were positive; 16 per cent. of 151 cases of paranoia were positive; 25 per cent. of 40 cases of chronic mania were positive; 20 per cent. of 26 cases of chronic melancholia were positive; 20 per cent. of 62 cases of dementia were positive. General paralysis invariably gave positive reactions.

140. **Latent Syphilis and Wassermann Test.**—Baar reports 26 cases, in 21 of which the Wassermann test was made either to corroborate the diagnosis already made, or to prove the necessity of antisyphilitic treatment, in cases in which no diagnosis of syphilis could be made, in spite of all appreciation of present knowledge of clinical symptoms of latent syphilis. The test proved positive in 19, while it was negative only in 2, one being a patient with meningitis spinalis lumbalis, who had been treated with iodid up to the time of the test; the other being a patient with bilateral hydrothorax, who had been subject repeatedly to specific treatment. Baar finds that these results prove beyond a doubt the advantage of the chronic intermittent over the symptomatic treatment.

141. **Diagnosis of Typhoid.**—Fick has successfully employed the ammonium oxalate method of diagnosing typhoid by means of blood cultures in 25 cases. Not a single negative report subsequently proved a clinical typhoid and, conversely, every positive report was clinically proved correct. Fick has modified the Epstein technic, first in the amount of blood taken; 10 c.cm. is preferable and is obtained in all cases in which it can be. Second, it does not seem necessary to plate

and culture out positive blood specimens. This takes considerable time, which is a factor of great importance to the physician, so he believes that it is sufficient to call an organism *Bacillus typhosus*, when it is Gram-negative, is actively motile, and can be made to agglutinate with typhoid agglutinative serum.

Vermont Medical Monthly, Burlington

April

145 Rational Treatment of So-called Inoperable Uterine Cancer. W. B. Chase, Brooklyn.
146 Evolution of Medicine and Some Important Problems Especially Important Connected with It. H. C. Tinkham, Burlington.
147 Sudden Death in its Medicolegal Aspects. C. F. Dalton, Burlington.

Journal Oklahoma State Medical Association, Muskogee

April

148 The Trend of Modern Therapeutics and Treatment of Disease. A. B. Leeds, Chickasha.
149 The Relative Pathology Complicating a Displaced Uterus. G. N. Ballard, Oklahoma City.
150 s. H. H. Wilson, Shawnee.
151 obart.
152 nportant. C. L. Reeder, Tulsa.
153 . . Glickensderfer, Shawnee.

Detroit Medical Journal

April

154 Operative Treatment of Fractures. F. B. Walker, Detroit.
155 An Enormous Waste of Human Life. G. H. Cunningham, New York.
156 Various Catheters for the Eustachian Tube. E. Amberg, Detroit.
157 Medical Inspection of Public Schools. J. W. Van Derslice, Oak Park, Ill.

Montreal Medical Journal

April

158 The Ancient Greek Schools of Medicine. A. G. Nichols, Montreal.
159 Demonstration of Trypanosoma Cruzi. J. L. Todd, Montreal.
160 Sacroiliac Strain, Tendon Transfer, Double Congenital Club-Foot. J. H. Nutter, Montreal.
161 *Unusual Rupture of an Aneurism. J. McCrae, Montreal.

161. **Unusual Rupture of an Aneurism.**—The subject of McCrae's report, a male negro, aged 43, died suddenly of a ruptured aneurism. A porter by occupation, he had been troubled for 3 weeks by pain in the chest, beginning between the shoulders and coming to the front; it was burning in character, rather intense and severe on coughing or sneezing. Swallowing, also, was accompanied by the same pain. For an hour after eating, the pain seemed increased, and occasionally he felt as if he were choking; by reason of the pain he could not sleep on his right side. No sign of aneurism was elicited. He suddenly developed dyspnea, slowing respirations and a pulse that was barely perceptible. Presently his breaths were drawn at minute-long intervals, and he died, not before it had been observed, however, that the right chest became flat on percussion from the apex to the fifth rib in front. Death followed the onset of dyspnea in about 15 minutes.

The autopsy, 5 hours after death, showed that an aneurism of the transverse arch of the aorta, not bigger than 3 by 2.5 cm. had ruptured; the blood had passed behind the esophagus and had dissected up the parietal pleura on the back wall of the thorax, throwing the lung forward, until a clot, weighing more than 1,200 grams, had nearly filled the available space of the right chest. The ascending limits of the aorta were not enlarged. The left carotid took origin from the innominate artery. The left subclavian opened 1 cm. beyond this. At the level of the left subclavian opening, on the posterior wall, was an area 3 cm. in both diameters, surrounded by a distinct ridge and forming a shallow sacculation in which the wall was fairly transparent from extensive loss of the media. At the upper and outer angle of this area was a somewhat slit-like opening 2.5 cm. transversely by 8 mm. in the long axis of the vessel opening into a false aneurismal sac, lying to the left side of and in front of the aorta. This sac was 3 cm. from side to side and 2.5 cm. in height. An opening from this sac (the final rupture) led into the tissues behind the esophagus, and was in direct connection with the huge retropleural hemorrhage. In the first part of the descending aorta was another puckered area showing loss of media. Below this the aorta showed little change, save frequent fatty plaques of the intima.

The Ophthalmic Record, Chicago

April

162 Cataract Resulting from Electric Shock. J. M. Robinson, Duluth, Minn.
163 Herpes Zoster Ophthalmicus. E. A. Clarke, Canon City, Colo.
164 Recovery from Chronic Sympathetic Ophthalmitis with Normal Vision. G. Friebis, Philadelphia.
165 Congenital Cataract of an Unusual Type. W. Zentmayer, Philadelphia

Buffalo Medical Journal

April

166 Dividing Professional Fees M. D. Mann, Buffalo.
167 Gunshot Lesions of the Spinal Column. J. P. Creveling, Auburn, N Y
168 The Medical Man of China. J. A. Rafter, Buffalo.

Journal of Nervous and Mental Disease, Lancaster, Pa.

April

169 *An Isolated Case of Family Periodic Paralysis. M. Mailhouse, New Haven, Conn.
170 *Anesthesia and the Lack of It in Diagnosis of Spinal Cord Tumors P Bailey, New York.
171 *Spinal Cord Tumor Observed within a Period of 10 days: Observations of the Behavior of the Cerebrospinal Fluid. W C Krauss Buffalo
172 *Henoch's Purpura with Spinal Cord Symptoms. G. W. Howland, Toronto, Canada
173 *Ankle Clonus in a Case of Major Hysteria. J. D. Heard and T. Diller, Pittsburg.

169. **Family Periodic Paralysis.**—Mailhouse agrees with J. J. Putnam that inhibition plays a prominent rôle in the development of the symptoms and that the paralytic phenomena are similar to those produced by curare. In a case observed by him there was a striking diminution in the amount of magnesium salts eliminated by the urine, hence possibly retention in the blood or muscle and hence inhibition at such times when the resisting power is lowered. Another phenomenon pointing in the same direction is that of the coagulating blood in this case, calcium salts being considered now as promoting blood coagulation. When a specimen of blood was taken from the ear, clotting took place so rapidly that it was with much difficulty that the pipette could be drawn full of the fluid. An examination of the digestion of the patient in the interval between attacks also showed an abnormality. Gastric digestion was imperfect in that he was unable to care for the connective tissue that he consumed in his meat. Examination of the urine showed the presence of creatin in not inconsiderable quantities. There also appeared a positive reaction in tests for protein (there were no casts) and in two instances for proteose, i. e., like a Bence-Jones albuminuria, as is found in cases of osteomalacia.

170. **Anesthesia in Spinal Cord Tumors.**—A careful investigation of all the cases in the literature has convinced Bailey that no tumor of the spinal cord can be diagnosticated with sufficient certainty to justify operation if cutaneous sensibility is intact. In three patients seen by him many things pointed to a tumor being present, but the subsequent course of the disease proved that in all probability there was no tumor, and certainly that operative interference would have resulted in nothing but embarrassment to those recommending it. The chief point of clinical difference at the time the symptoms were at their height was the absence of anesthesia. In all, one or both knee-jerks were lost and the pain was the exact counterpart of pain as it may occur in tumor; in two, there was distinct local atrophy; in one there was fibrillary twitching. In none was the spinal complex complete; sphincter paralysis was absent and paralysis was slight or wanting. But these symptoms are frequently missing when the tumor is demonstrable; not so anesthesia. Consequently, it seems to Bailey, as though absence of anesthesia should constitute the final contraindication to operation. To this general rule there is one notable exception, namely, the tumors of the cauda equina growing in the sacral canal. These slowly growing and excrutiatingly painful tumors can exist for months or even years without interfering with sensibility. A number of such cases successfully operated on, are on record. In all of these preoperative diagnosis was certified to by excessive tenderness and sensitiveness in the sacrum, demonstrable by pressure externally and per rectum. This latter symptom, namely, bone tenderness, is so pronounced in these cases that the patients cannot lie on the back or stand the slightest jar

without extreme pain. The bone tenderness is so characteristic that it in itself is almost sufficient to justify the diagnosis of tumor. Coupled with some spinal symptoms, the diagnosis is certain even in the absence of anesthesia.

171. **Spinal Cord Tumor.**—In these three cases a phenomenon was observed by Krauss during the course of these operations, which he thinks may be of some service in locating the situation of the tumor after the dura has been exposed, provided the tumor is intradural, or intramedullary. The increased bulk of the cord produced by an intradural or intramedullary tumor will completely occlude the lumen of the dura and interrupt the passage or flow of the cerebrospinal fluid. There will result a damming back of the cerebrospinal fluid cephalad of the constriction and an increased tension will follow. Caudad of the constriction (tumor) the cerebrospinal fluid will be diminished in tension, owing to the cutting off of the normal tension and circulation. Incising the dura cephalad of the tumor will cause a spurting of the cerebrospinal fluid, a jet being projected from several inches to a foot or more in height, according to the tension or force of the fluid; while caudad of the tumor, an incision into the dura, will cause only a welling out of the fluid from the aperture, flooding the field of the operation without any force or tension. Observing the behavior of the fluid, the surgeon will know whether he is cephalad to the tumor or caudad to it, and can make his incision accordingly.

172. **Henoch's Purpura with Spinal-Cord Symptoms.**—The problems to be solved in Howland's case are (1) whether it is a case of purpura in which spinal-cord hemorrhages are present, and is a painful elbow due to a local joint hemorrhage or to the spinal hemorrhage? Or (2) is it a case of syringomyelia accompanied by its quota of sensory signs and joint conditions? And (3) what relation is there between the syringomyelia and the purpura?

173. **Ankle Clonus in Major Hysteria.**—The diagnosis of hysteria in this case rested on the character of the convulsive seizures; the spinal and submammary tenderness; the mental condition of the patient; the paralysis of the left arm; together with the rapid improvement of all these symptoms under treatment appropriate for major hysteria. This improvement was coincident with the enforcement of a treatment consisting of strict isolation and systematic and studied neglect of the patient. As to the ankle clonus, when this patient was first examined, the evidence strongly pointed to the diagnosis of hysteria, except for the presence of the ankle clonus, which is always looked on as an expression of an hysterical state; and this view is borne out by the complete disappearance of the ankle clonus two weeks later, during which period the patient had in every way greatly improved and by complete recovery under a strict antihysterical treatment.

Archives of Ophthalmology, New York

March

174 Value of the Serodiagnosis of Syphilis in Ophthalmology. M. Cohen, New York.
175 Quinin-Blindness: Report of Cases. G. E. de Schweinitz, Philadelphia.
176 Ophthalmia Nodosa. F. W. Marlow, Syracuse.
177 Surgical Treatment of Trachoma by the Combined Excision of Heisrath and the Tarsal Resection of Kuhnt. H. W. Wootton, New York.
178 Enucleation Necessitated by Getting into the Conjunctival Sac the Point of an Aniline Pencil. J. Dunn, Richmond.
179 A Modified Sideroscope. W. K. Gzn, Leyden, Holland.
180 Adenocarcinoma of the Pituitary Body: Case Under Observation for Four and a Half Years: Pathologic Examination. W. T. Shoemaker, Philadelphia.

Journal of Biological Chemistry, Baltimore, Md.

March

181 The Purin Ferments of the Rat. A. Rohde and W. Jones. Baltimore.
182 The Salts of Cytosine, Thymin and Uracil. V. C. Myers, New Haven, Conn.
183 *The Presence of Iodin in the Human Pituitary Gland. H. G. Wells, Chicago.
184 The Physiologic Behavior of Iminoallentoïn and Uroxanic Acid. T. Saiki, New Haven, Conn.
185 *Nylander's Reaction. M. E. Rehfuss and P. B. Hawk.
186 *Nylander's Reaction in Presence of Mercury or Chloroform. M. E. Rehfuss and P. B. Hawk.
187 Effects of Soluble Salts on Insoluble Phosphates. J. E. Greaves, Salt Lake City, Utah.

183. **Iodin in the Pituitary Gland.**—Wells concludes from his own analyses and others that the presence of iodin as a normal constituent of the pituitary gland must be regarded as unproved. The positive results obtained by Schnitzler and himself have been due to the therapeutic presence of iodin, although it still remains possible that the hypophysis may at times contain appreciable quantities of iodin due to a selective affinity for iodin similar to that of the thyroid.

185. **Nylander's Reaction.**—Rehfuss and Hawk regard Nylander's reaction as one of clinical value. In the examination of over 700 urines there were only 2 instances in which Nylander's reaction was positive and Fehling's test negative. The statement of Kistermann that any protein-free urine of acid reaction which gives a negative Nylander's test may safely be said to be sugar-free in a clinical sense seems to be justified. In making the test, 5 c.c. of the urine under examination are placed in a test tube, 0.5 c.c. of Nylander's reagent are added and the tube placed in a boiling water bath for five minutes. The authors use a large porcelain bath, the bottom of which forms an admirable background for observing and comparing the various color changes. The tube is then removed and examined before a white background. A black end-reaction indicates the presence of a reducing sugar in the urine under examination.

186. **Influence of Mercury on Nylander's Reaction.**—Rehfuss and Hawk have investigated the influence of mercury in the urine on Nylander's reaction and find that it has no inhibitory action, either when added to the urine in small amounts (0.005 per cent.) or when excreted in the urine by syphilitic patients receiving mercury. They also found that the presence of chloroform in the urine will not prevent the obtaining of a positive Nylander's reaction when dextrose is present. In case an excessive amount of chloroform is present, it should be removed by subjecting the urine to a preliminary boiling for a period of five minutes before applying the test.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

April 16

1 *Localization of Cerebral Function, based on the Clinico-Pathologic Study of Mental Disease. J. S. Bolton.
2 Surgery of the Lymphatic System. W. S. Handley.
3 Lumbar Puncture in Meningitis and Allied Conditions. G. S. Landon.
4 *Sterilization of the Skin by Alcoholic Solution of Iodin. H. F. Waterhouse and W. S. Fenwick.
5 Embolism of the Abdominal Aorta with Mitral Stenosis and Thrombosis of the Pulmonary Veins: Death: Necropsy. S. P. Phillips.
6 Bile-Producing Primary Malignant Tumor of the Liver ("Malignant Adenoma"). F. P. Weber.
7 Epidemic Cerebrospinal Meningitis, Treated by Flexner and Jobling Serum: Recovery. J. J. Weaver.
8 *Occurrence of a Peculiar Protein in the Urine. J. Henderson.

1. **Localization of Cerebral Function.**—In this lecture Bolton records his observations with regard to the structure and functions of the final type of cortex, the pre-Rolandic or psychomotor. Bolton regards the human cerebrum not as a sensorimotor, but as an intermediate, or associative ganglion, which, on the one hand receives sensorial impressions and elaborates them by processes of association into the physical equivalents of psychic products of high complexity, and which, on the other hand, to a variable extent, controls, selects and coordinates certain of these physical complexes whose function is to set in action the lower motor centers. On this functional basis he would divide the cerebrum into pre-Rolandic and post-Rolandic portions, the former of which possesses controlling and executive functions, and the latter receptive and elaboratory. He subdivides the pre-Rolandic part, or frontal lobe into a posterior or psychomotor area, which is concerned with the evolution of such physical complexes as are necessary to give external expression to the results of cerebral association, and into an interior or prefrontal area which is able to control, select and coordinate certain of the results of post-Rolandic cerebral association, and either to allow these to undergo psychomotor transformation or to inhibit this process. The cortex of the post-Rolandic portion of the cerebrum Bolton regards as consisting of projection areas, of which the visosensory area is a type, each of which is surrounded by or

possesses in its proximity zones of special association, of which the visuo-psychic *region* is a type, which zones are hall-marked in function according to their appropriate projection areas; and of intermediate cortex in which are fused and elaborated the results of special processes of association.

4. **Sterilization of the Skin.**—Waterhouse employs a 2 per cent. solution of iodin in rectified spirit, painting this solution on the skin 2 hours prior to the operation, the preliminary shaving and any necessary washing of the skin having been performed some time earlier in order to allow the skin to dry. For greater security in important cases, he repeats the painting one hour later on the operating table. In radical operations for hernia in small boys when it is always difficult to keep the penis under cover he invariably paints the whole organ and scrotum with the 2 per cent. iodin solution and leaves them uncovered with a full sense of security. In cases in his experience in which it appeared probable that the skin incision might be infected by discharge from a hollow viscus—e. g., colotomy and cholecystotomy—it was found advisable to paint the line of incision with the 2 per cent. iodin solution each time the wound was dressed. The incision was then covered by dry cyanid gauze. Though this frequent painting might be carried out twice daily for from 4 to 6 days no interference with the healing of the incision was noted. Comparing the iodin method with that still in common use, Fenwick is convinced that the former is more easily carried out, takes less time, is less unpleasant to the patient, and gives better results than the latter.

8. **Peculiar Protein in the Urine.**—The diagnosis in the case cited by Henderson was doubtful. The striking features were anemia, cachexia and wasting, and the condition of the urine. *Careful and repeated examination of the patient failed to* detect any evidence of malignant disease, the presence of which was at first suspected. There was no evidence of disease of the bones. The blood presented the characters of a fairly severe secondary anemia. The case was regarded as one of chronic nephritis of some standing, and probably of the "diffuse" variety, accompanied by a considerable degree of anemia and a peculiar urinary condition.

To the naked eye the urine presented nothing abnormal. Its color was pale amber, its reaction distinctly acid, and it had a specific gravity of 1015. On subjecting it to the ordinary heat test for albumin an abundant white curdy precipitate was at once obtained. This precipitate was completely dissolved on the addition of one drop of 20 per cent. acetic acid. The precipitate had no resemblance to that of phosphates, which is frequently found on performing this test. On contact with nitric acid in the cold, a copious, thick, white precipitate was obtained which disappeared on warming, to reappear on cooling. From these results it was evident to Henderson that he had to deal with a protein other than ordinary globulin. All the ordinary protein tests were obtained—marked biuret, Millon, marked Liebermann, and tryptophane reactions, and on boiling the urine with lead acetate alkaline solution it blackened. The protein was precipitated by all the ordinary reagents which precipitate proteins—viz., trichloracetic, tannic, and picric acids, etc. The protein was fully precipitated on half saturation with ammonium sulphate. After filtration this precipitate was dialyzed against running water, and the product left in the sausage paper behaved quite as in the original urine. The ammonium sulphate precipitate was further dialyzed till free from salt, and it again showed the same properties. The material obtained from this salt-free product, either taken down to dryness *in vacuo* at a low temperature or precipitated with alcohol and dried, was found to be a whitish-grey powder, ash-free, and when in solution it possessed all the properties of the original body in the urine.

British Medical Journal, London

April 16

9 *Ideals in Psychiatry. E. Goodall.
10 *Cardiolysis. H. T. Bewley.
11 The Board of Trade Sight Tests. A. R. Galloway.
12 Phlyctenular Diseases of the Eye. S. Stephenson and J. A. Jamieson.
13 *Series of Cases of Congenital Ophthalmoplegia Externa (Nuclear Paralysis) in the Same Family. H. Cooper.
14 Mucocele of the Nasal Sinuses, and its Complication by Optic Neuritis. R. Fullerton.
15 Successful Rhinoplasty in an Old Woman. S. White.
16 Inequality of the Papilledema in Certain Cases of Increased Intracranial Pressure. R. L. Ley.
17 *Ossification in the Brachialis Anticus Following Injury to the Elbow.* W. Tyson.
18 *Case of Poisoning by Camphorated Oil. F. Barker.
19 *Treatment of Varicose Veins of the Leg by Avulsion. H. D. O'Sullivan.
20 *Surgery of the Lymphatic System. W. S. Handley.
21 *A New Aspect of the Effects of Boric Acid as a Food Preservative. J. Bernstein.

9. **Ideals in Psychiatry.**—The chief features of a psychiatric clinic, according to Goodall, consist in suitably designed wards and exercising grounds, an out-patient department, rooms for hydrotherapy and electrotherapy, massage and gymnastics, a lecture theater, a consultation room for the medical staff, where cases, as admitted can be discussed, and lines of treatment or research agreed on, where also there can be medical reunions, with discussion of recent developments in research. There should be a medical library, a laboratory for clinical examinations, and others for pathology, biochemistry, and experimental psychology. The medical staff should consist of a director without administrative duties (but the steward who performs these would be subordinate to him); of paid assistants in good proportion: resident physicians on an honorarium, attached for training in mental disorders and who would assist in the work generally, experts in charge of the different laboratories. Qualified medical men should be allowed to conduct research in these. There should be the usual lectures and clinical and laboratory courses for students, courses and demonstrations for postgraduates, and courses in forensic psychiatry for the instruction of law students. The nurses should be in high proportion, say one to five patients. It is highly important that as few legal formalities as possible be observed in regard to the admission, detention and discharge of patients, and that the director be accorded a free hand in respect to treatment. In all cases of doubt and difficulty the psychiatric clinic would have the advantage of the advice and assistance of those in charge of the other clinics of the university or hospital. Such a clinic would be the natural training place for students who proposed to take up mental disorders as a specialty, and for those who seek a diploma in psychiatry, such as many are now advocating.

10. **Cardiolysis.**—When the ribs or sternum, or both, are distinctly moved up by each systole of the heart, Bewley holds that this movement may be looked on as the heart's prayer for more room. One cannot cure the leak nor wholly remove the internal extra work, though by rest and appropriate treatment we endeavor to lessen it; but the external extra work Bewley thinks can be removed by giving the heart space enough from before backward so that it may not be forced to move unyielding structures at each systole—that is to say, by resecting several ribs, and, if necessary, a part of the sternum. For such cases he believes cardiolysis will be found of very great use and if the condition of the patient is sufficiently good, one should seriously consider the advisability of the operation.

13. **Congenital Ophthalmoplegia Externa.**—In Cooper's case the patient's father, grandfather and great grandfather were born with the same affliction but had no squint, the paralysis being complete save for the internal ocular muscles. His father had two uncles, one affected, one not. He had two aunts, neither of whom was affected. The father also had two brothers, one affected, one not. The patient also had a younger brother who was affected slightly. Three other brothers and one sister are well. It is interesting to note that no female member of the family has been affected; no case has ever developed after birth, but all have been congenital. The ptosis has been almost complete in all cases, except that of the patient's youngest brother, who is the first of the series in whom the affliction has appeared in a lesser degree.

18. **Poisoning by Camphorated Oil.**—A female child, 1 year and 4 months old, swallowed at least half an ounce of camphorated oil, so that about one dram of solid camphor in solution was probably taken. The father found the child with its mouth full of oil. He promptly turned her over and she vomited. One hour later she vomited again. The eyes gradually became staring, she moaned, and convulsions began. She was then given some salt and water, and vomiting occurred. Barker saw her two hours after she took the oil.

nosis of progressive paralysis had been erroneous, but Steyerthal affirms that the trouble had probably been detected in its early stage and had yielded to appropriate measures.

Münchener medizinische Wochenschrift

March 29, LVII, No. 13, pp. 674-728

90 *Recognition and Treatment of Non-Perforated Duodenal Ulcer. M. Wilms.
91 Treatment of Varicocele. H. J. Lameris.
92 *Treatment of Exophthalmic Goiter. (Behandlung der Base- [illegible] cher.
93 Im [illegible] le Diagnosis of Tuberculosis. [illegible] mittelst Antiformin und seine Verwendung für die histologische Diagnose der Tuberkulose.) H. Merkel.
94 Fate of Fat Acids in the Organism and Relations with Acetone Bodies. (Ueber den Abbau von Fettsäuren im Organismus und über die gegenseitigen Beziehungen der Azetonkörper.) L. Blum.
95 Connection between Plasmolysis, [illegible] Staining Properties of Bacteri[illegible] Plasmolyse, Verdaulichkeit, Lösl[illegible] von Bakterien.) W. Kruse.
96 Etiology of Granulomatous Lymphomatosis and Lymphatic Leucemia. (Zur Aetiologie der Hodgkinschen Krankheit und der Leukaemia lymphatica.) E. Fraenkel and H. Much.
97 *Cancer and Mechanical Laws of Development. (Die malignen Tumoren und die Entwicklungsmechanik.) J. Ries.
98 Theory and Practice of the Wassermann Reaction. E. Jacobsthal.
99 Carbon Dioxid Snow in Treatment of Warts, Corns, etc. (Behandlung der gewöhnlichen harten Warzen, des Klavus und Tyloma mit Kohlensäureschnee.) J. Fabry.
100 Adhesive Plaster Dressing for Ambulatory Treatment of Traumatic Effusion in the Knee. A. Blecher.
101 *Insidious Chronic Septic Endocarditis. (Endocarditis lenta.) H. Schottmüller. Commenced in No. 12.

April 5, No. 14, pp. 729-776

102 Differentiation of Diplopia of Psychic Origin. (Zur Diagnostik psychogenen Doppeltsehens.) F. Hamburger.
103 Importance of Tonsillitis in Etiology of Acute Articular Rheumatism. (Mandelentzündung und Rheumatismus.) Pickenbach.
104 *Dosage for Bier's Constriction Hyperemia. (Dosierung der Stauungshyperämie.) M. zur Verth.
105 Cholera Toxin. M. Hahn.
106 Atypical Proliferation of Epithelium after Injection of Scarlet Red Oil and Amidoazotoluol Oil into Human Subcutaneous Tissue. H. Stoeber.
107 Serologic Differentiation of Human Blood from Different Individuals. (Ueber eine Methode das Blut verschiedener Menschen serologisch zu unterscheiden.) E. von Dungern and Hirschfeld.
108 Mechanism of Metallic Sounds in Ileus. (Bedingungen des Zustandekommens des peristaltischen Metallklingens bei Ileus.) G. Leuenberger.
109 The *Micrococcus tetragenus* in Septicemia and Mixed Infections. O. Meltzer.
110 Relations between the Tonus, the Secreting Power and the Position of the Lowest Part of the Stomach. (Beziehungen zwischen dem Tonus, der Salzsäureproduktion und der Lage des tiefsten Punktes des Magens.) H. Bräuning.

90. **Recognition of Duodenal Ulcer Before Perforation.**—Wilms was able to differentiate the bleeding duodenal ulcer, in the absence of perforation, in three cases recently and cured the patients by merely folding over the floor of the ulcer and suturing it together so that the floor protruded into the lumen of the intestine. The ridge thus formed sloughs away and the same results are attained as with excision, with a much less serious operation. In his three cases there had been recurring intestinal hemorrhage for years unaccompanied by disturbances on the part of the stomach in two cases; in the third a gastroenterostomy had already been done. He applies his method of diagnosis from within. He first attempted it for examination of the lower segment of the esophagus, by introducing the finger through an incision in the anterior wall of the stomach; the wall is drawn up around the base of the finger with a purse-string suture, the finger being protected with a rubber cot. By this means it is easy to reach and palpate the interior of the upper part of the duodenum. When the ulcer is flat it is hard to distinguish it unless the wall of the duodenum is pressed against a hard background. He protests against routine performance of gastroenterostomy and urges suturing the ulcer, as above mentioned, to ward off perforation and hemorrhage.

92. **Treatment of Exophthalmic Goiter.**—Kocher states that there are fully 1,000 cases on record now of operative treatment of exophthalmic goiter, including 376 cases from the Kocher clinic, 76 per cent. of the patients being cured. In the latter group the exophthalmos has subsided in three-fourths of the cases; its subsidence depends more on its duration than on its degree. He discusses the 20 cases in which the operation failed to cure, showing that recurrence of the goiter was responsible for this in some of the cases, in others secondary lesions of the other organs were responsible, and in the remainder there was a tendency to neurasthenic-hysteric manifestations. The latter had been sometimes erroneously ascribed to the exophthalmic goiter itself, but they should be considered separately and the fact borne in mind that a neurotic tendency influences the onset, the degree and the course of the exophthalmic goiter. He compares the almost inevitable improvement and the constant cure when the operation has been correctly done with the uncertain results of internal treatment, everything speaking in favor of the former. At the same time, he insists on the importance of supplementing operative measures with internal, and preparing patients for operation by absolute rest and symptomatic treatment, although he warns against anything liable to raise the blood pressure or induce excessive diuresis. He adds that the best internal treatment is a stay at an altitude of from 3,000 to nearly 5,000 feet, mild hydrotherapy in the form of cool sponging and baths, regulation of the diet to reduce the proportions of albumin and fats, and a rest cure interrupted by regular, systematically increasing muscular exercises against resistance, with phosphorus, arsenic or iron internally. He advises against specific thyroid treatment, his experience being that in any form its action is inconstant and transient in these cases, although he admits that organotherapy may yet be perfected to great efficacy.

97. **Etiology of Cancer.**—Ries suggests the possibility that injury of the nucleus of the cell causes it to lose the faculty of checking the development of the supernumerary centrosomes, which thus develop atypically and the proliferation assumes a malignant nature.

101. **Slow Endocarditis.**—Schottmüller applies the term "endocarditis lenta" to an infection localized in the endocardium, the germs sallying forth thence occasionally into the blood. The germ in question, he says, he isolated ten years ago, entitling it the *Streptococcus mitior seu viridans;* it is not very virulent but induces necrosis in parts of the endocardium, leading to wart-like efflorescences and causing a clinical picture distinguished by the insidious onset, the vague slight pains in the joints and groups of muscles, with palpitations and dyspnea and a dry cough, the latter causing the suspicion of a lung rather than of a valvular affection, especially if the patients are pale and anemic. In the five cases in his experience there were evidences of mitral endocarditis. At first there were no audible murmurs in some cases, but the persistent fever suggested the true diagnosis. In two of his cases death occurred from cerebral hemorrhage, in the others the disease progressed to myocarditis. The spleen was generally enlarged. The main feature of the disease is the tendency to embolism and to aneurism in various arteries and to hemorrhagic nephritis. Patches of purpura and retinal hemorrhages confirm the septic nature of the affection, but the fever was never very high and chills were rare. The endocarditis generally proved fatal in a year or two. The diagnosis is rendered certain by the bacteriologic blood findings. Treatment can be only symptomatic.

104. **Dosage for Constriction Hyperemia.**—The most suitable degree of constriction is shown to be that of the minimal ("diastolic") arterial pressure, that is, the degree of constriction with a 15 cm. wide, air or water-filled cuff with which the peripheral pulse just begins to show the influence of the constriction. The region at this moment of the minimal arterial pressure contains the largest possible amount of blood. The point of arterial minimal pressure is slightly below the minimal pressure as determined by auscultation: but the auscultation findings are useful for warning against too powerful constriction in applying the constricting band.

Therapie der Gegenwart, Berlin

April, LI, No. 4, pp. 145-192

111 Medicinal Treatment of Cholelithiasis. F. Eichler.
112 *Apparatus for Treatment of Asthma. G. Zuelzer.
113 Relish and Appetizers. I. (Genuss und Genussmittel.) W. Sternberg.
114 *Treatment of Surgical Tuberculosis. W. Kausch. Commenced in No. 3.
115 Medicinal Treatment of Diabetes. Lenné.

112. **Apparatus for Treatment of Asthma.**—Zuelzer regards the primary inflation of the lung as the most essential factor in the acute attack of asthma; the congestion in the bronchial

mucosa is of secondary importance. In treatment he formerly gave atropin to combat this tendency to exaggerated distention of the lungs, but lately has devised an apparatus which answers the same purpose by regulating the respiration. An illustrated description of the apparatus is given. It is worked by compressed air or oxygen and permits a positive pressure up to 40 cm. water during inspiration and a negative pressure of the same intensity during expiration. After three or four minutes' use of the apparatus, the outlines of the lung retrogress by 2 or 3 fingerbreadths. The apparatus, he says, can take the place of a pneumatic cabinet.

114. **Treatment of Surgical Tuberculosis.**—Kausch lays special stress on the technic for treatment of cold abscess with iodoform-glycerin emulsion: The main points he states are to inject the fluid under pressure and in sufficient amounts, afterward holding the mouth of the fistula closed for five minutes at least, and better still for ten. At the end of this time if any fluid escapes it is pure glycerin, the iodoform having settled on the walls. He uses a rubber and glass syringe, the tip being introduced into a hard rubber olive or ball, the latter fitting over the mouth of the fistula more tightly than with other appliances and permitting application of more force. He reports a number of examples to show the good results attainable with this technic. In one case a man of 60 had had a tuberculous process in the left elbow and wrist for several years, both joints being much deformed; there were also ten fistulas and amputation had long been advised. Kausch applied constriction hyperemia according to Bier and injection of iodoform-glycerin emulsion into the fistulas under pressure; the arm was also immobilized with a splint. The entire process healed in about two months, leaving a fairly movable wrist. In another case the diagnosis wavered between tuberculosis and osteomyelitis and no improvement was observed in four weeks during which the iodoform treatment had been carried out by assistants. Kausch then investigated and found that too small amounts had been injected and without sufficient pressure and the mouth of the fistula had not been held closed long enough afterward; he then made the injections himself and prompt recovery followed. The patient in this case was a woman of 50 with a fistula in the left shoulder which had persisted for a number of years.

Virchows Archiv, Berlin

March, CXCIX, No. 3, pp. 385-570

116 Pathologic Anatomy and Microbiology of Measles. (Masern.) C. Ciaccio. Commenced in No. 2.
117 Atresia of Duodenum and other Malformations. (Fall von Duodenumatresia in Kombination mit Defekt des mittleren Oesophagus und des untersten Rektum sowie mehrfachen anderen Missbildungen.) K. Meusburger.
118 Seven Cases of Deformities in the Esophagus. (Fistulae oesophageo-oesophageales congenitae.) S. Ciechanowski and L. K. Glinski.
119 Endoneural Proliferation from Pressure on Peripheral Nerves. (Weiteres über endoneurale Wucherungen.) S. Trzebinski.
120 Tumor of Base of Skull. (Interessante Geschwulst der Schädelbasis.) G. Masera.
121 Russell's Fuchsin Bodies. (Russellsche Körperchen.) J. W. Miller.
122 Chemical and Histologic Research on Staining of Fat Tissue. (Ueber Fettfärbung.) P. Eisenberg.
123 Study of Infundibular Cysts in the Human Brain. H. W. E. Ehlers.
124 Origin of Melanin. (Zur Melaningenese.) Meirowsky and A. Jaeger.

Wiener klinische Wochenschrift, Vienna

April 7, XXIII, No. 14, pp. 495-528

125 *Pathologic Anatomy of Suicide. (Zur pathologischen Anatomie des Selbstmordes.) J. Bartel.
126 *Exclusion of Source of Heat Production during Momburg Belt Constriction. (Ausschaltung der Muskulatur als Wärmequelle, eine Folge der Momburgschen Blutleere.) H. Ehrlich.
127 *New Studies of Strychnin, Calomel and Bismuth. (Beitrag zur Bewertung von Medikamenten.) K. Chodounsky.

125. **Pathologic Anatomy of Suicide.**—Bartel tabulates the classified findings in 122 cases of suicide, including 55 women or girls. Certain traits in common were observed, especially hypertrophy of the internal organs and considerable development of the lymphatic tissue, the thymus being unusually large in many of the cases. On the other hand, the arterial system seemed to be undeveloped, the appendix remarkably long, the stomach showing
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studded with cysts. Defects in development were common. He urges closer examination of the anatomic conditions, striving to discover *constitutional factors for the tendency* to suicide.

126. **Exclusion of Heat Production in the Muscles as Result of Momburg Belt Constriction.**—Ehrlich reports a case in which a healthy young man had the belt constriction applied to arrest hemorrhage from a traumatic injury in the groin. The tubing was left in place for thirty-two minutes, while the femoral artery was sutured. Fifteen minutes after the close of the operation the patient's temperature was found to be 35.2 C. and *it did not return to normal for five hours* (95.1 F.). This experience was repeated in animals under the Momburg belt constriction; Ehrlich explains it as due to the motor and chemical insufficiency of the musculature resulting from the constriction. Hours were required for the restoration of normal temperature and especially sensitive animals never recovered. The disturbance in the heat production persisted longer in animals weakened by hemorrhage than in normal animals. Especial care therefore is necessary in applying the Momburg belt to anemic patients.

127. **New Research on Action of Strychnin, Calomel and Bismuth.**—Chodounsky reviews certain research that has been done in his laboratory which seems to throw new light on some old drugs. Experiments with frogs, rabbits, etc., failed to confirm the general assumption that strychnin is a tonic for the musculature of the stomach and intestines; on the contrary, there was rather muscular relaxation, even during tetany. These experiences, he declares, warn against the use of strychnin in chronic gastrointestinal diseases, especially when there is a tendency to constipation. He has found in the literature *14 fatalities from the therapeutic use of calomel*, death occurring in from 3 to 42 days after a total dose of from 0.3 to 2.7 gm. (5 to 40 grains) in 7 cases and in the others after a total dose of from 2.4 to 4.6 gm. (up to 70 grains). Serious intoxication was observed in small dogs given a total of 1.04 gm. (22 grains) in the course of 12 days, and a total of 2.75 gm. (42 grains) for large dogs in 6 days. The prolonged administration of small doses seems to be more dangerous but the larger doses have a more intense toxic action in case there is no purging. His research also showed that the production of bile was diminished after calomel, and also that the drug had an irritating action on the kidneys. His research has further confirmed the toxic possibilities in the use of bismuth.

Zeitschrift für Urologie, Leipsic

March, IV, No. 3, pp. 161-240

128 Improved Technic for Electrotherapy of Prostatitis. (Ueber Elektrisierung der Prostata mittels intermittierenden Induktionsstroms.) G. J. Muller.
129 Bladder Calculi in Diverticula in Women. (Zur Kenntnis der eingesackten Blasensteine bei der Frau.) E. R. W. Frank.
130 Source of Phosphaturia in Gonorrhea. (Zur Frage des Ursprunges der Phosphaturie bei Gonorrhoe.) H. Lohnstein.

Zentralblatt für Chirurgie, Leipsic

April 9, XXXVII, No. 15, pp. 529-568

131 The Alcohol-Iodin Method of Surgical Sterilization. Desinfektion der Haut nach Grossich.) G. Hesse.

Zentralblatt für Gynäkologie, Leipsic

April 9, XXXIV, No. 15, pp. 497-528

132 Operative Treatment of Retroflexion of the
Operation von Pestalozza.) F. Montuoro.
133 Necessity for Legal Regulations in Re
Induced Abortion. (Notwendigkeit ge
gen für den künstlichen Abortus.)
134 Retroperitoneal Tumors. R. Marek.

Gazzetta degli Ospedali e

March 24, XXXI

135 Precipitation of Colloid
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W. La Ferla.

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136 *Possibility of T
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136. **Snails an**
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